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The Agricultural Situation in the People's Republic of China and Other Communist Asian Countries

Review of 1974 and Outlook for 1975



U.S.
Department
of Agriculture

Economic
Research
Service

Foreign
Agricultural
Economic
Report No. 111

CONVERSION EQUIVALENTS

Pounds per bushel

Wheat and potatoes	60
Rye and corn	56
Barley	48
Oats	32

One kilogram	equals	2.2046 pounds
One centner or metric quintal	"	220.46 pounds
One metric ton	"	10 centners or 2204.6 pounds
One hectare	"	2.471 acres
One acre	"	0.4 hectare
One kilometer	"	0.6 mile

Metric tons to bushels

<i>One metric ton</i>	<i>Bushels</i>
Wheat and potatoes	36.743
Rye and corn	39.368
Barley	45.929
Oats	68.894

Bushels to metric tons

<i>One bushel</i>	<i>Metric tons</i>
Wheat and potatoes02722
Rye and corn02540
Barley02177
Oats01452

To convert centners per hectare to bushels per acre, multiply by:

Wheat and potatoes	1.487
Rye and corn	1.593
Barley	1.8587
Oats	2.788

To convert bushels per acre to centners (metric quintals) per hectare, multiply by:

Wheat and potatoes	0.6725
Rye and corn	0.6277
Barley	0.5380
Oats	0.3587

One metric ton of ginned cotton = 4.593 bales of 480 pounds.

UNITED STATES DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE
WASHINGTON, D.C. 20250

September 16, 1975

E R R A T A

The following changes should be made in The Agricultural Situation in the People's Republic of China and Other Communist Asian Countries, Foreign Agricultural Economic Report No. 111, September 1975, published by Economic Research Service:

Page 22 should be labeled page 23.

Page 23 should be labeled page 22.

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ABSTRACT

Agricultural production was up in 1974 in the People's Republic of China (PRC), North Korea, and the Democratic Republic of Vietnam (North Vietnam), but the harvest in the Mongolian People's Republic (Mongolia) declined. PRC grain, sugar and cotton output rose to record levels and most of the oilseed crops and other minor crops exceeded the 1973 output. Total value of U.S.-PRC agricultural trade reached a record high in 1974 but it slackened off sharply during the period July 1974 to June 1975. North Korea also had a record grain crop, while the harvest in North Vietnam was below the past record. All countries plan production increases for 1975, based on increased farm inputs.

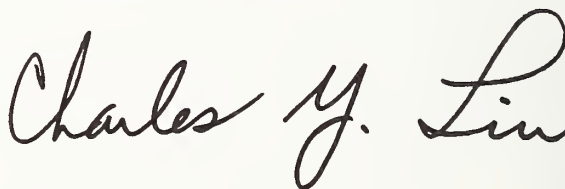
KEYWORDS: People's Republic of China, Democratic Republic of Vietnam, Mongolian People's Republic, North Korea, agricultural production, agricultural inputs, agricultural policies, foreign trade.

FOREWORD

This report summarizes major agricultural developments in 1974 and the outlook for 1975 for the People's Republic of China (PRC), the Mongolian People's Republic (Mongolia), North Korea, and the Democratic Republic of Vietnam (North Vietnam). The *Agricultural Situation in the People's Republic of China and Other Communist Asian Countries. Review of 1973 and Outlook for 1974*, issued May 1974, was the first situation report on these countries. It contained major historical and background information. This issue updates the current situation and statistics and provides some additional basic information.

Authors of the PRC section are Charles Y. Liu, Marion R. Larsen, James R. Scullen (fertilizer), and Carolyn L. Whitton (water conservancy). Linda A. Bernstein contributed to the U.S. PRC trade section. Principal authors of other sections are Marion R. Larsen (North Vietnam and North Korea) and James R. Scullen (Mongolia).

Other agricultural situation reports have been published for the Soviet Union, Eastern Europe, Western Europe, the Western Hemisphere, the Far East and Oceania, and Africa and West Asia.



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THE AGRICULTURAL SITUATION IN THE PEOPLE'S REPUBLIC OF CHINA AND OTHER COMMUNIST ASIAN COUNTRIES:

Review of 1974 and Outlook for 1975

SUMMARY

Agricultural production in the Communist countries of Asia registered gains of varying degrees in 1974. Crop production in the People's Republic of China (PRC), North Korea, and the Democratic Republic of Vietnam (North Vietnam) exceeded 1973 levels, while in the Mongolian People's Republic (Mongolia) production declined. Record grain crops were evident in the PRC and North Korea, but North Vietnam's best grain crop in years was not a record. The high goals set for North Vietnam's agriculture in 1975 indicate that all the 1974 goals were not attained in that country's program of reconstructing its agricultural economy. Livestock increased moderately in all four countries, with North Vietnam experiencing the least increase. Foreign trade of each country continued to expand in 1974.

People's Republic of China

For 1975, prospects are good that crops will be equal to or better than 1974 crops. Weather was more favorable in the first 7 months of 1975 than a year earlier, especially in the North. Major winter wheat producing Provinces had completed harvesting in June and now report bumper crops, over last year both in yield and output. Spring wheat, harvested in July, appears to at least equal last year's crop. Harvests of other winter crops such as rapeseed are also reported as good or better than those of last year. Growth of early rice and miscellaneous grains has progressed satisfactorily. With favorable weather, particularly in the North, 1975 agricultural output in the PRC could be equal to that of the last 2 years and probably better. This prospect is enhanced by timely rains in much of the Northern China in late July.

Weather in the PRC in 1974 was not as favorable for agricultural production as in 1973. Dry weather prevailed in the first half of the year in the North China Plain, and precipitation was spotty in the second half. However, massive irrigation efforts minimized the impact of adverse weather.

¹All tonnages are metric.

The PRC claimed that total grain production reached a record high of 259 million tons, almost a 4-percent increase over that of 1973.¹ Estimates of the Economic Research Service (ERS), U.S. Department of Agriculture, indicate 233 million tons, only a 2.2-percent rise.

Since 1970, the PRC has released numbers or percentages for annual total grain production which appear to be a continuing series. Therefore, the ERS estimates of total grain production in the PRC since 1958 were adjusted upward and adopted as the official USDA series, while the official data for 1949-57 were unchanged. Revisions will be made whenever new information becomes available. For 1974, the PRC and ERS estimates of total and individual grain production are as follows:

Item	Total	Rice	Wheat	Misc. grain	Tubers (grain equivalent)
	Million metric tons	Million metric tons	Million metric tons	Million metric tons	Million metric tons
ERS	233.0	106.0	28.0	74.0	25.0
PRC ¹	259.2	117.9	31.2	82.3	27.8

¹Estimates for individual categories of grains were derived by applying the proportion each grain is of the total in the ERS estimate.

Other records were claimed for cotton, tea, and sugar crops. Production of fibers, oilbearing crops, sugar, vegetables, tea, and other crops was limited to only slight increases for most and reductions for some. The 1974 cotton crop was initially claimed by Chou En-lai to be 2.5 million tons; a subsequent announcement indicated that the crop had been a record, and based on this information, ERS estimates the crop at 2.6 million tons for 1974. Other fiber crops exceeded 1972 and 1973 levels by varying amounts. Oilseed production, except cottonseed, was up somewhat, but no specific figure was mentioned. ERS

estimates are: Soybeans, 7.0 million tons; peanuts, 2.7 million tons; rapeseed, 1.2 million tons; and cottonseed, 5.07 million tons. Other crops, including tobacco, mulberries, rubber, and tropical crops, continued to advance. Vegetable production was reported to have made large gains.

Livestock of all categories in 1974 appeared to have fared well, but there were no official announcements as in 1973. Fulfillment of the goal of more than one hog per household in some areas and one hog per person in other areas was reported.

Chemical fertilizer production in 1974 was estimated at 25 million tons, with 5.7 million tons of imports, giving a total supply of about 31 million tons. Japan provided all the nitrogenous fertilizer the PRC imported in 1974—2.13 million tons. Kuwait and Mexico exported urea and sulphur to the PRC. The PRC imported phosphate rock from Canada and North Africa. Imports of nitrogen fertilizer by the PRC in 1974 did not reach the 1973 level because of higher costs and tighter supplies. Three additional large ammonia-urea plants were purchased by the PRC in 1974, bringing the total to 13 scheduled for ammonia-urea production by the early 1980's.

Massive efforts in water conservation projects have been made recently in the PRC. With the larger projects built in the 1960's as a foundation, smaller multipurpose projects have been reemphasized so far in the 1970's. In 1974, wells represented 25 percent of all water conservancy projects, with reservoirs, canals, and irrigation stations comprising about 10 percent each. The rest consisted of more general projects involving large programs such as dams and smaller programs such as ponds. Expansion of irrigated land was made possible from this effort. Reports in 1974 indicated that 1.6 million pump wells were in use to irrigate 7.3 million hectares of cropland, significantly expanding total irrigated area. Available information indicates that the northern 10 Provinces represented about 50 percent of the nation's total water conservancy projects in 1974, with wells at the top of the list and winter wheat and cotton areas receiving the most attention.

Agricultural policy remained unchanged in 1974. Three-level ownership of communes, production brigades and production teams, and the permission of private plots for personal needs, were specifically stipulated in the PRC's constitution adopted by the Fourth National People's Congress. Capital construction, water conservancy projects, and farmland improvements were stressed to ensure stable and high crop production.

In 1974, the PRC imported 5.6 million tons of wheat, down from 5.8 million tons in 1973. Canada, the United States, and Australia provided the bulk (5.3 million tons) of Chinese wheat imports. Wheat purchases from Canada, Australia, and Argentina were negotiated under 3-year agreements while the United States served as a residual supplier. Corn

imports, at 1.3 million tons, were also lower than in 1973, when 1.5 million tons were imported. Soybeans bought by the PRC rose from 200,000 tons in 1973 to 700,000 tons in 1974, with the United States as the sole supplier. The PRC purchased 858,000 (480-lb.) bales of cotton from the United States in 1974.

For the July-June year 1974/75, the PRC imported about the same quantity of wheat, 5.7 million tons, as in 1973/74. Corn, soybeans, and cotton imports decreased sharply—corn from 2.9 million tons in 1973/74 to 560,000 tons in 1974/75; soybeans, from 660,000 to 130,000 tons; and cotton, from 878,000 to 319,000 bales.

In 1974, trade between the United States and the PRC increased for the third year in a row, though the rate of increase slowed. Total agricultural trade increased from \$597 million in 1973 to \$689 million in 1974, of which 96 percent represented U.S. agricultural exports to the PRC. U.S. wheat exports to the PRC decreased from 2.6 million tons in 1973 to 1.9 million tons in 1974, while corn exports dropped from 1.4 million to 900,000 tons. The PRC's imports of soybeans and cotton from the United States increased slightly. Deferments and terminations of contracts with the United States deflated earlier estimates of 1974 U.S. wheat, corn, soybean, and cotton exports to the PRC. Reasons for the deferments and terminations were speculated to be good PRC crops in 1974 and shortages of foreign exchange. PRC agricultural exports were also below expectations in 1974. Rice exports, estimated at 1.9 million tons, milled, remained the most important item. Exports of meat and meat products decreased somewhat, with Hong Kong importing the bulk of these items.

Mongolian People's Republic

Mongolia produced an average grain crop in 1974, well below the 1973 record. Significant gains were made in the livestock sector, particularly in the number of young animals. This sector produces about 60 percent of Mongolia's gross national product. The Soviet Union continued to be Mongolia's largest trading partner. Exports of camel hair and cashmere to the United States amounted to \$1.36 million in 1974.

North Korea

North Korea's economy and agriculture registered gains in 1974, with agriculture probably having a record year. Claims were made that some of the agricultural goals, particularly those for grains, in the 6-year plan (1971-76) were attained 2 years ahead of schedule, thus providing the impetus for more extravagant goals in 1975. Rice and corn, the two major grain crops, probably established new records. The livestock sector continued to expand, with

emphasis on increasing hogs, poultry and poultry products, and sericulture. Further progress was made in Government-sponsored development programs for aiding agriculture, including irrigation, fertilization, mechanization, and electrification of rural areas. Notable achievements were made in expanding chemical fertilizer manufacturing capacity and in mechanizing farming operations. The ratio of cultivated land to tractors is now about equal to that in the United States.

Foreign trade continued to expand despite foreign exchange problems. Agricultural exports increased, with additional rice sales heading the list. Some curtailment of imports, including wheat and corn, probably resulted from a better grain crop position. Adoption of high goals for agricultural output in 1975 has set the tone for this year's efforts in the agricultural sector.

PEOPLE'S REPUBLIC OF CHINA

China's agriculture, like the rest of the economy, continued to expand in 1974. Progress was uneven among the various agricultural sectors, and overall production increased at a lower rate than in 1973. Partly as a result of good crops, imports of wheat, cotton, and soybeans were lower.

The effects of unfavorable weather were not as critical in 1974 as in past years, primarily because of the progress made in water conservation. Visitors to China have reported that the distribution of irrigation water is now more timely and in more adequate amounts. These improvements, together with the use of improved seed varieties with shorter maturing requirements, helped to offset the dry weather that occurred at times during the growing season.

The availability of chemical fertilizers in China declined in 1974, primarily because of a reduction in imports. The effect on agricultural production, however, appears to have been partly offset by an increase in natural fertilizers and other inputs and better management practices by the production brigades and production teams.

Grains

Total Grain Production

At the Fourth National People's Congress on January 13, 1975,¹ Premier Chou En-lai stated that total grain production in 1974 was 140 percent above the 1949 level—which would be 259.2 million or 264

Democratic Republic of Vietnam

North Vietnam's economy was still in transition in 1974. The country experienced a continued deficit in agricultural output, large imbalances in foreign trade, subpar industrial capacity, deficiency in the raw material base, and mediocre management at all levels.

Weather was more favorable in 1974. Although crop production rose significantly over the low 1973 output, particularly production of rice and tubers, it still did not equal the good 1972 and 1961 crops, partly because of poor management. Special emphasis was put on expanding production of corn, the second most important crop, but no reports of its progress were released. Information on industrial crops was scant. The livestock sector remained stagnant. Although there was some increase in hog numbers, no claim was made of achieving the 1974 goal.

million tons (almost a 4-percent increase over 1973),² depending on the base figure used.³ Both figures are higher than the ERS estimate of 233 million tons.

The PRC has announced numbers and percentages for yearly total grain production for 1970-74. Sporadic announcements could also be found for selected years since 1958. Based on these releases, ERS revised the previous ERS estimates for total and individual grain

Year	Total	Rice	Wheat	Misc. grain	Tubers (grain equiva- lent)
	Million metric tons	Million metric tons	Million metric tons	Million metric tons	Million metric tons
ERS:					
1970	225.0	100.0	27.0	73.0	25.0
1971	225.0	103.0	26.0	72.0	24.0
1972	215.0	98.0	28.0	65.0	24.0
1973	228.0	103.0	27.5	72.5	25.0
1974	233.0	106.0	28.0	74.0	25.0
PRC:					
1970	240.0	106.7	28.8	77.9	26.6
1971	246.0	112.6	28.4	78.7	26.3
1972	240.0	109.4	31.2	72.6	26.8
1973	250.0	112.9	30.2	79.5	27.4
1974	259.2	117.9	31.2	82.3	27.8

²During late 1973 and most of 1974, various PRC officials' estimates claimed over 250 million tons for 1973, with one claim for 257 million tons.

³The 1949 total grain figure was originally put at 108 million tons. In recent years, PRC officials have used the rounded figure of 110 million tons. A 140-percent increase would put 1974 production at 259.2 million tons if the 108-million-ton figure is used, and at 264 million tons if 110 million tons is the base.

¹*China Reconstructs—Special Supplement*, Vol. XXIV, No. 3, March 1975, p. 20.

production and adopted them as the USDA official series.⁴

A comparison of ERS grain production estimates and those based on PRC official estimates for the last 5 years, since the PRC began announcing total grain estimates, appears on page 3.

Early Harvested Grains

Despite unusual weather, the early harvest, comprising about one-third of China's annual grain production, was a surprisingly good one.⁵ Partly because of acreage expansion, production of early rice increased significantly. Much of the Yangtze River Valley and the areas further south experienced cold spells in early spring and then periods of dry weather. As a result of frost-kill, some replanting of early rice was necessary, and harvesting was delayed for several weeks. However, favorable weather during the latter part of the growing season resulted in an excellent harvest.

Of the 13 Provinces now producing early rice, only Kweichow and Kiangsu did not record an increase. These two Provinces, however, are minor early rice producers. Claims ranged from increases of 10 percent in the more established early rice Provinces to 40 percent in Szechwan Province, a recent entrant into large-scale early rice production under the double rice crop program. Claimed records in yields and production appear justified.

Winter grain crops (winter wheat, barley, and pulses) grown in the Yangtze River Basin do not appear to have been adversely affected by the unfavorable spring weather. (While these crops are seldom mentioned individually in official PRC statements, they are included in the aggregate of grain production appraisals.) Winter crops to the north, however, principally winter wheat, were affected by the unusually heavy precipitation at planting time. In many areas, poor stands resulted and the planting schedule was delayed. The dry winter and spring which followed probably reduced yields.

Wheat in the North China Plain did not reach expectations. Only two Provinces in the north (one was Honan, the largest wheat producer) claimed an increase in winter wheat production. Little was said officially about wheat in South China, where

acreage is expanding, and in the northwestern areas of the country, where spring wheat is grown. Wheat in these areas probably did better than in the North China Plain. Kwangtung Province, for instance, claimed a large increase in winter wheat acreage.⁶ Although these areas are comparatively small, their expanding wheat area is contributing significantly to total wheat output.

The official PRC appraisal of 1974 wheat production indicated that output increased over the 1973 level, but did not reach the record 1972 level. In August 1973, after the wheat harvest, officials stated that the 1973-wheat crop equaled but did not surpass that for 1972. If, as officials claimed, the 1974 wheat crop exceeded the 1973 crop but set no record, the 1973 crop probably was revised downward, thus placing the 1974 crop somewhere between the 1973 crop and the record 1972 crop.

Late Harvested Grains

Production of China's "late harvest crops" (intermediate and late rice, corn, millet, sorghum, potatoes, and other lesser grains) is difficult to appraise because of a lack of official comment about them.⁷ Also, in 1974, they were produced under a wide range of growing conditions caused by unusual weather conditions.

As in 1973, no specific report for late-harvested grains was published, but the claim of a record grain crop carries with it the inference that the late harvest crops were good. No official reports were made on tuber crops (Irish potatoes, sweet potatoes, manioc, and taro roots). Production of these crops has shown only a slight upward trend in the past few years. Little change is believed to have occurred in 1974.

In general, during the spring and early summer (the period of initial crop development), below normal precipitation occurred in the northern, east-central, and south-central areas. These areas account for a large portion of coarse grain production in China and for several industrial (commercial) crops. Heavier than usual typhoon action occurred along the southeastern coast beginning in August. At about the same time, above normal precipitation began in the eastern part of the North China Plain and spread westward as the season advanced. Many crop areas north of the Yangtze do not yet have adequate irrigation facilities. It is doubtful that crops there developed to their full potential in 1974, even with

⁴See appendix for details.

⁵The early harvest, also referred to as the summer grain harvest, includes crops harvested from the first of the year to the beginning of autumn on the lunar calendar. According to information from the Chinese Academy of Agricultural Science, the beginning of autumn on the lunar calendar is roughly August 8 on the western calendar. The crops are winter crops (winter wheat, barley, rye, pulses, sweet potatoes, and corn), various fast-maturing catch crops planted in the early spring and harvested in early to mid-summer, and early rice.

⁶In 1973, reports from Fukien, Hopeh, Kwangsi, Kwangtung, and Yunnan Provinces, where wheat is a new but expanding crop, indicated a substantial increase over 1972. Similar references in 1974 indicate that winter wheat, harvested in early spring, in South China is becoming increasingly important.

⁷This harvest is called the fall or autumn harvest. It is the largest harvest and includes crops harvested after the beginning of autumn—August 8 on the western calendar.

supplemental irrigation, because of the dry conditions.

In the other areas, however, yields of late harvested crops were probably maintained at fairly high levels—in fact, many areas reported record yields. But there were also many areas where yields obviously were low, and some areas may have suffered crop losses.

In the area south of the Yangtze River, where water control rather than water shortage is generally the major problem during the cropping season, fewer weather problems were encountered. Nevertheless, mixed results were obtained from crops in the area.

The intermediate rice crop appears to have been fairly successful. It was planted on time and apparently got off to a good start, but experienced dry weather in mid-season, particularly in the south-central and east-central areas of China. Planting of the late rice crop was delayed because of the extended harvest of the early rice crop. It was affected by early season dry weather and later by insects and typhoons in the coastal Provinces of Kwangtung and Fukien.

In the western section of Northeast China (Manchuria), where crop production is somewhat marginal, weather was dry during the second half of the 1974 growing season. However, significant gains occurred in the production of all crops grown there, including coarse grains, soybeans, and spring wheat. All three Provinces in Manchuria (Kirin, Liaoning, and Heilungkiang) claimed large increases in grain production. Kirin and Liaoning claimed new records for coarse grains, and Heilungkiang claimed substantial increases in spring wheat.

The New China News Agency, Peking, on December 22, 1974, gave the following summary: "The harvests were generally better than last year's on China's major marketable grain bases, from the plain drained by the Sunghua and Nunchiang Rivers in the Northeast to the Pearl River delta in the south, from the Kansu corridor in the west to the Yangtze River delta on the east coast." The Hopei-Shantung-Honan region, China's deficit grain area until recently, had more marketable grain than in 1973. Provinces of Northwest China (Shensi, Kansu, and Ningsia Hui Autonomous Region) claimed a 10-to 30-percent increase in production, mainly because of increased irrigation. Also, the northern parts of Anhwei and Honan Provinces were singled out as making substantial gains in overcoming weather adversities associated with grain production.

Industrial and Other Crops

Special emphasis was placed on increasing 1974 production of industrial crops, including fibers (cotton, jute, and kenaf), oilbearing crops, sugar crops, vegetables, fruit, tea, tobacco, and mulberry trees for silkworm culture. The Government instituted programs aimed at assisting local units to increase the availability of farm machinery, chemical

fertilizer, pesticides, and other inputs, improve farm management, and guarantee adequate food grain to areas producing primarily industrial crops.

However, production of many industrial crops showed only slight increases, and for some crops, output fell below 1973 levels.

China's major industrial crop, cotton, after suffering the effects of drought, low temperature, waterlogging, and insects, failed to reach the 1973 record level, according to the year-end report.⁸ Premier Chou En-lai placed the figure at 470 percent of 1949 production, or a little over 2.5 million tons⁹—slightly lower than last year's record crop. But a subsequent report indicated an alltime high in yield and production.¹⁰ Based on this report, which was issued after Premier Chou En-lai's report to the People's Congress in January 1975, the estimated production of lint cotton is 2.55 million tons for 1973 and 2.61 million tons for 1974. Officials claimed that production of hemp and Kenaf (the two main bast fibers) more than doubled during the past 3 years (with a 16.4-percent gain in 1974), resulting in self-sufficiency in those crops.

Oilseed production rose in 1974, with new records of production claimed for some crops. Acreage of rapeseed, the major oilseed, has been increasing in recent years. It was officially claimed to have expanded 600,000 hectares between 1972 and 1973, and production was claimed to have increased 40 percent. No claim was made of an increase in acreage in 1974, only an increase in yield. One report stated that rape production in the vicinity of Shanghai provided a surplus, but there was no indication of the size of the total crop. Production of other oilseeds (peanuts, sesame, and linseed) purportedly increased.

It appears that production of soybeans, used for oil and consumed as a grain in China, has received less attention than other industrial crops grown in the country. No official report has been available on soybeans for at least the last 2 years. Imports and exports have been erratic. Although China traditionally has been a net exporter of soybeans, volume has declined substantially since 1968, with Japan remaining the major and almost sole customer. Since 1972, China has imported soybeans. In the northern soybean producing area, weather was favorable during the 1974 growing season. But in the southern producing area, mixed weather conditions, dry in the spring and wet in the latter part of the growing season, probably affected yields. It is estimated that the crop increased only slightly compared with 1973.

⁸New China News Agency, Peking Radio, Dec. 31, 1974.

⁹New China News Agency, Peking Radio, Jan. 20, 1975. Also, *China Reconstructs—Special Supplement*, Vol. XXIV, No. 3, Mar. 1975, p. 20. Also, *China Pictorial*, No. 3, Mar. 1975, p. 11.

¹⁰*China Pictorial*, No. 3, Mar. 1975, p. 11.

Estimated PRC oilseed and soybean harvests in recent years are as follows:

Year	Soybeans	Peanuts	Rape-seed	Cotton-seed
	Million metric tons	Million metric tons	Million metric tons	Million metric tons
1967	6.95	2.30	0.80	3.88
1968	6.50	2.15	0.80	3.62
1969	6.20	2.35	0.70	3.54
1970	6.90	2.65	0.80	4.00
1971	6.70	2.58	0.83	4.44
1972	6.30	2.40	1.00	4.25
1973	6.70	2.60	1.16	5.18
1974	7.00	2.70	1.20	5.07

Officials revised the original 1974 sugar crop estimates upward to a record level early in 1975.

The official announcement on crop production on December 30, 1974, did not indicate an increase in sugar-bearing crops, but stated that production had increased considerably in the last few years and that 1974 output was 30 percent over output in 1971.¹¹ Estimated production of sugar in 1971/72 is 1.8 million tons; a 30-percent increase would mean 2.34 million tons of refined sugar. The claim for the 1972 sugar crop was 28 percent higher than the one for the 1971 crop, or 2.3 million tons. Except for the good crop in 1973, which reflected expanded acreage of sugarbeets and sugarcane, it appears that 1970-74 sugar crops did not keep pace with increases in previous years. This may be due to the continuing emphasis of utilizing the best cropland for grain production.

A New China News Agency broadcast from Peking on December 27, 1974, stated that sugar production had increased 10-fold since 1949. Treating 1 "fold" as 100 percent would give a refined sugar production figure of about 2.2 million tons, or 2.4 million tons of centrifugal sugar.¹²

The nearness of these estimates—2.34 million and 2.2 million tons—may be more coincidental than accurate, but, at least they give evidence of some increase in sugar-bearing crops. These figures probably do not represent the entire production of sugar, since a large proportion (about 30 percent) of the cane crop is utilized in raw and semiprocessed form at local processing facilities.

Most of the increase in sugar production has resulted from rapidly expanding sugarcane acreage in parts of South China, where there is little

¹¹New China News Agency, Peking Radio, Dec. 30, 1974. Also, Foreign Broadcast Information Service, *Daily Report: People's Republic of China*, No. 252, Dec. 31, 1974, p. E2.

¹²The conversion factor from refined to centrifugal sugar is 1.078. Further, the 2.2 million tons figure probably refers to 1973-74 sugar production, since more than half of the harvested sugar crop was not processed until early 1975.

competition between cane production and rice production. Kwangtung Province, the leading producer, still accounts for about half the country's sugarcane. In Kwangsi Chuang Autonomous Region, which is now in second place (replacing Szechwan), there is potential for continued expansion in cane production where other competing crops, including rice, are less significant. A major aim in increasing production is increasing yields. New varieties of both beets and cane are being developed, but much more production technology needs to be adopted to raise yields nearer the level of those in the more technically advanced sugar producing areas in the world.

Output of other industrial crops, including tea, tobacco, mulberry (for the silkworm industry), rubber, and tropical crops (palm oil, coffee, coconut), continued to rise in 1974. Vegetable production, particularly in industrial and population centers, increased and distribution methods improved. Some increases also were noted in the production of fruit and medicinal herbs.

Livestock

Livestock production in the PRC appears to have fared well in 1974, although there were no official announcements of progress as in 1973. Stress was on upgrading breeding stock, increasing the feed base, improving the management of livestock enterprises, and providing more assistance to peasants participating in livestock production. Also, there was probably an effort to bring livestock production into better balance with crop production.

In the major livestock areas of the country, particularly in the pastoral areas of Tibet, Sinkiang, and northwestern and southwestern China, efforts were made to provide livestock with greater protection against heavy snowstorms and winter weather in general. More winter shelters were reportedly built, pastures were improved through irrigation, and greater amounts of cured feed were supplied. In many of these areas, modest increases in livestock numbers were claimed.

Hog production continued to be the priority in livestock development efforts, particularly in the cropping areas where byproducts of grain processing provide a large portion of supplementary feed. The main emphasis in 1974 was on improving the various breeds, improving feeds and feeding methods for faster gain, and providing better service to producers of hogs and poultry on private plots. Collectivization of hog production, which began a few years ago, was muted in 1974 but reemphasized in 1975. The goals of more than one hog per household in some areas and one hog per person in areas especially suited to hog raising reportedly have been met in many parts of the country. The number of hogs probably continued to increase in 1974, but not at the claimed rapid pace of the past few years.

There is little indication that mechanization of farming operations has resulted in any decline in numbers of large draft animals. Improvements reportedly have been made in the output of meat and dairy products in heavily populated areas and in industrial centers. This would indicate that China's vast array of large animals, especially cattle, are being used increasingly for livestock products, but still at a much lower rate than for draft power.

Fertilizer

At the Fourth National People's Congress, Premier Chou En-lai stated that in 1974, output of chemical fertilizer products had increased 330 percent over the 1964 level, which would mean production of about 25 million tons. With imports estimated at 5.7 million tons, total supply of commercial fertilizer in the PRC would have been about 31 million tons (product weight) in 1974.

Japan continued to be China's major supplier of commercial fertilizer imports in 1974. All of the imports from Japan were nitrogenous fertilizer (ammonium chloride, ammonium sulphate, urea, and nitrogenous fertilizer not otherwise specified), and they totaled 2.13 million tons (product weight), valued at \$177.1 million. Kuwait supplied 300,000 tons of urea, and Mexico provided 80,000 tons of dark sulphur. The contracts with Mexico called for monthly 20,000-ton shipments between September and December 1974.

Total PRC imports of nitrogenous fertilizer in 1974 probably did not reach 1973 levels because of higher costs, tight supply conditions, and foreign exchange constraints. Japanese fertilizer prices to the PRC as of January 1975—about \$200 per ton of urea and roughly half as much for ammonium sulphate—were double those of a year earlier. For supplies of potash, the PRC has relied on Canada, and for imports of phosphate rock, on North Africa.

In March 1974, the PRC contracted to purchase 3 large ammonia-urea production facilities, bringing to 13 the total number of such facilities for which the PRC has contracted since October 1973. Each facility is to employ advanced technology and to produce 1,000 tons of ammonia per day. Construction schedules for building and installing the first facility may have fallen behind the original target date, 1976. Total production of chemical fertilizer nutrients from the 13 plants is expected to be 3.5 million tons by the early 1980's. To increase the means of paying for these plants and to supply them with adequate raw materials, the PRC is planning to step up output and export of crude oil.

Water Conservation

For several years, the PRC has intensively promoted water conservation projects to prevent damage to crops by drought, flood, and water-

logging; to enlarge irrigated acreage; and to increase agricultural production generally. Efforts in 1974 exemplify the importance attached to water conservation projects.

Since 1949, the types of water conservation projects emphasized have varied widely. Early in the 1950's, the focus was on state construction, with Soviet aid, of large flood control projects. During the Great Leap Forward, local construction of more labor-intensive, less expensive, shallow irrigation wells was advocated. In 1960, the Chinese realized that because of poor preparation and construction, these smaller projects often failed to prevent drought, flooding, and water-logging, or caused alkalinization or salinization of fields. Consequently, in the mid-1960's, national planning shifted emphasis to initial construction of larger flood and drought control projects as a foundation for future water conservation control. Now that flood control has been claimed to be successfully completed, the emphasis is again on smaller, multipurpose or irrigation-oriented projects.

In 1974, irrigation wells of all types were the primary water conservation projects. Of the total projects reported, wells represented about 25 percent; reservoirs, about 10 percent; canals or channels, 10 percent; and power or pump irrigation stations, 10 percent. The remaining 45 percent included many unspecified water conservation projects; large projects such as dams and hydroelectric stations; and small projects such as ponds, sluice gates, embankments, dikes, drainage ditches, culverts, tunnels, and underground pipelines.

Expansion of irrigated acreage was made possible by the water control campaign's increased effort to develop all types of wells. The PRC reported that in 1974, it had 1.6 million power and engine-driven pump wells¹³ which irrigated 7.3 million of the total irrigated hectares. The 10 northern Provinces¹⁴ (see tabulation below) account for 1.2 million, or 76 percent, of the wells; most of the rest are in western China. Honan and Hopei are the leading Provinces in pump wells, with 460,000 and 400,000, respectively.

Estimating the share of cultivated area in the PRC that is irrigated is difficult because of insufficient information. Early in 1975, the PRC reported that during the latest winter campaign, 2.7 million hectares of irrigated area had been added to the total reported for 1974, and that the total arable land had increased to 14 percent of total land area.¹⁵ If this is the case, then the total cultivated area of 110 million

¹³Until more accurate descriptions can be obtained, the PRC terminology has been used.

¹⁴For convenience, "Provinces" refers to Provinces, Autonomous Regions, and centrally controlled Municipalities.

¹⁵*Nihon Keizai Shimbun*, Tokyo, Mar. 13, 1975, p. 5; also, Foreign Broadcast Information Service, *Daily Report: People's Republic of China*, No. 93, May 13, 1975, p. E5.

hectares (11 percent of total land area) has also increased, reducing the percentage of land estimated to be irrigated by 1974.

The water conservation plan promulgated in the 1960's placed emphasis on water projects in the 10 northern Provinces. Fifty percent of the water conservation work in 1974 took place in these Provinces, with wells accounting for about 35 percent of the projects, and reservoirs, canals, and pump stations, for about 10 percent each. These Provinces also represented 55 percent, or about 16 million hectares, of the total irrigated area for 1974 as summed from PRC sources, and accounted for 1.2 million, or 76 percent, of the power and engine-driven pump wells.

During the 1960's the southern, rice areas had received priority in water conservation work. The water conservation plan called for improving water distribution according to ease of project development, and these areas already had relatively more irrigated land than other areas in the PRC. Because the fewer existing facilities and the more extreme weather fluctuations in the 10 northern Provinces made the need for investment in water conservation greater there, priority was not shifted to this area until the first stage of the plan was completed in the early 1970's.

Of the irrigated area in the 10 northern Provinces, 67 percent is in the more fertile farm areas of Hopei, Peking, Tientsin, Shantung, and Honan. Clearly, these Provinces were emphasized because improvement of their water distribution systems could yield the greatest return to agriculture at the least input cost. In Hopei, the irrigated area was increased by 86,666 hectares in 1974 alone. In contrast, in Inner Mongolia, the increase was only 40,000 hectares in 1974. Because they have a higher population density, these five Provinces have been grain-deficit areas. Therefore, the policy of improving their self-sufficiency first does yield greater returns to the nation. It could also be that the PRC wished to improve the output of cotton, wheat, and corn—major crops in these five Provinces—by giving them greater inputs, while the millet, soybean, and sorghum areas of the Northeast, Shansi, and Inner Mongolia received fewer inputs. The benefit of concentrating water inputs in the five wheat, cotton, and corn producing Provinces is evident in the good 1974 harvests of these crops, despite poor weather in the first half of the year.

In the 13 Provinces south of the North China Plain, more multipurpose systems are being constructed for power generation, fish breeding, and prevention of waterlogging, as well as irrigation. Pump or power irrigation and drainage stations represented more than 15 percent of 1974 development in this area, followed by reservoirs and hydroelectric stations. These multipurpose projects served primarily to enlarge the irrigated area, but the potential for future

Province	Date of Information	Total irrigated area in hectares
		1,000
Heilungkiang	Dec. 1974	933.3
Liaoning	Oct. 1974	1,333.3
Kirin	Nov. 1974	600.0
Inner Mongolia	Sept. 1974	927.0
Hopei	Nov. 1974	3,536.7
Peking	Dec. 1974	375.0
Tientsin		(¹)
Shantung	Dec. 1974	3,533.3
Shansi	Dec. 1974	931.3
Honan	Dec. 1974	3,200.0
Total		15,370.0

¹ A 1974 figure is not available. As of Dec. 1973, Tientsin's total irrigated area was reported as 35,250 hectares.

diversification was evident in this stage of the water development plan.

The six western Provinces—Shensi, Ningsia, Kansu, Tsinghai, Sinkiang, and Tibet—so far have received the least attention in the water conservation program. Emphasis in 1974, as in the rest of China, was on development of irrigation systems. In contrast to the other Provinces, development of new or improved irrigation ditches was about equal to that of canals and wells. In the three westernmost Provinces, the development of new canals and ditches surpassed that of wells. Much greater inputs, such as the Liuchiahsia Hydropower Station, the nation's largest, completed this year in Kansu, will be required in the future to convert this area into a major crop producer.

Other than the Provinces listed in the tabulation, only Tibet and Sinkiang reported totals or enough information to derive total irrigated area. The 1974 irrigated grassland area of Tibet was 600,000 hectares and that of Sinkiang, 8 million hectares.¹⁶ Other Provinces reported only irrigated area added in 1974, about 4 million hectares. The 1974 total of 28 million irrigated hectares that ERS collected from various PRC sources represented 25.5 percent of 110 million hectares of cultivated area. Of course, this is an incomplete total, since most of the 1974 reports were for the 10 northern Provinces.

The PRC has vigorously acclaimed 1974 as the most beneficial year yet for water conservation construction. Such significant success reflects the

¹⁶Even for grassland used only for grazing and not suitable for crop production, 8 million hectares seems high. Therefore, if Sinkiang were not included in the irrigated area totals reported this year, the 1974 reported irrigated area would be an even more incomplete 19 percent of the 110 million hectares of total cultivated area, while the 10 northern Provinces would represent an even larger 74 percent of the total irrigated area reported this year, illustrating still more vividly the targeting of the north in 1974 water conservation development.

achievement of self-sufficiency in the densely populated, five northern grain producing Provinces. In the winter 1974-spring 1975 slack season, the intensified pace of the water conservation program continued. Until the second phase of the water conservation plan is completed, the total irrigated acreage will probably continue to be increased, with the emphasis of development still on wells, canals, pumping stations, and reservoirs, and on the northern half of the agriculturally rich East China.

Agricultural Policy

Despite the intensity of the anti-Lin and anti-Confucius ideological campaigns in China, particularly in the first two-thirds of 1974, the impact on agricultural policy and agricultural production seemed to be minimal. National economic policy continued to emphasize the same order of priority: agriculture, light industry, and heavy industry.

Article 7 of the PRC Constitution,¹⁷ adopted at the Fourth National People's Congress in January 1975, stipulates a continuation of the basic rural structure of three-level ownership: commune, production brigade, and production team. The rural people's commune will continue to serve as the organization to integrate Government administration and economic management, with the production team as the basic accounting unit. Further, commune members are still permitted to farm small private plots to produce minor crops, such as vegetables and fruits, and to keep livestock for personal needs.

The agricultural tax will continue to be kept low to encourage a high level of savings by peasants, to be used for agricultural investment. Although state aid is used for farmland improvement and water conservancy projects, local resources are also to be used. The industry sector is exhorted to give full support to agriculture in supplying farm machinery, chemical fertilizer, power pumps, drainage equipment, and electric power. Other segments of the nation—for example, the People's Liberation Army and government and factory workers—were mobilized in 1974 to assist in planting and harvesting.

The policy of crop diversification, with emphasis on grain production, was unchanged. Conferences were held, and editorials and directives were issued frequently at both national and regional levels to urge facilitation of raw material supplies for light industry, self-sufficiency in farm goods traditionally imported, and greater foreign earnings from farm exports.

National policy to dispatch youths to the countryside from the populated industrial areas was greatly expanded in 1974. These youths, most of

them with a high school education, provided manpower in various services at the commune and brigade level in addition to manual labor in the field.

Agricultural Trade¹⁸

Although China's economic development plans are aimed at self-reliance, there is recognition that trading to obtain raw materials, equipment, and technology is necessary for national economic development. One of the basic principles of Chinese foreign trade policy is to maintain an equilibrium in the balance of trade.¹⁹ Recently, Deputy Minister of Foreign Trade Chai Shu-fan²⁰ asserted that payment by installment is "the only form of facilitation which China is willing to accept in its trade with foreign countries." He also indicated that the PRC is reluctant to open up long-term credit and joint ventures. Under these guidelines, the PRC has purchased major agricultural products such as wheat, corn, soybeans, and cotton, and has sold rice, meat, silk, livestock, and livestock products to developed, developing, and centrally planned countries.

Grain

China's grain imports in 1974 remained near the 1973 level. They amounted to 6.9 million tons—5.6 million tons of wheat and 1.3 million tons of corn. On a value basis, U.S. grain exports to China were worth \$330 million in 1974, down from \$410 million in 1973 (table 5). We supplied 41 percent (2.8 million tons) of China's 1974 grain imports, Canada shipped 29 percent (2.0 million tons), Australia provided 20 percent (1.4 million tons), and Argentina and France provided the rest (table 1).

Despite the large proportion of grain imported from the United States, the PRC continued to maintain a diversified pattern in its grain purchases, relying on Canada and Australia as its regular source of supply, and the United States as the residual supplier. In 1974/75, China's grain imports totaled 6.3 million tons—down from 7.6 million tons a year earlier. The United States ranked third among the suppliers, delivering 23 percent of total PRC grain imports, or 1.46 million tons. Canada supplied 38 percent (2.38 million tons), and Australia, 24 percent (1.51 million tons).

China's 1974 wheat imports were also about the same as in 1973. But as indicated below, there was some change in market shares of the various suppliers:

¹⁸Unless otherwise specified, a calendar year is denoted in the form, for example, 1974, whereas a July-June year is in the form, for example, 1974/75.

¹⁹A Statement by Li Chiang, Minister of Foreign Trade, *China's Foreign Trade*, No. 1, 1974, pp. 2-5.

²⁰Foreign Broadcast Information Service, *Daily Report: People's Republic of China*, No. 55, Mar. 20, 1975, p. A22.

¹⁷*China Reconstructs—Special Supplement*, Vol. XXIV, No. 3, Mar. 1975, p. 12.

Country	1973		1974		1973/74		1974/75	
	Million tons	Per-cent	Million tons	Per-cent	Million tons	Per-cent	Million tons	Per-cent
United States	2.6	45	1.9	34	3.0	54	1.44	25
Canada	2.4	41	2.0	36	1.3	24	2.38	42
Australia	0.8	14	1.4	25	1.2	22	1.51	26
Argentina	---	---	0.1	2	---	---	0.15	3
France	---	---	0.2	3	---	---	0.23	4
Others	---	---	---	---	---	---	---	---
Total	5.8	100	5.6	100	5.5	100	5.71	100

The long-term agreement with Australia requires the PRC to purchase 1 to 1.5 million tons of wheat in each calendar year during 1974-76, with the amount to be purchased from Canada for 1974-76 totaling 4.8 to 6.0 million tons. In February 1975, the PRC purchased 1 million tons of wheat from Australia for delivery between April 1975 and March 1976. In April, an additional 1.14 million tons were purchased from Canada for shipment between May 1975 and March 1976. Both purchases were part of the long-term agreements and were below the minimum quantity specified in the agreements. Delivery dates under the 3-year agreements have been extended.

Corn imports by the PRC declined slightly from 1.5 million tons in 1973 to 1.3 million tons in 1974, with the United States supplying 900,000 tons and Argentina, 400,000 tons. The U.S. share, however, dropped from 93 percent (1.4 million tons) in 1973 to 69 percent in 1974.

In 1974/75, our corn exports to China totaled only 23,000 tons because of PRC termination of contracts. This contrasts sharply with the 1.8 million tons shipped in 1973/74, when we accounted for 90 percent of China's corn imports. For 1974/75, Argentina's corn exports to China reached 538,000 tons—up from 300,000 tons a year earlier. Total PRC corn imports in 1974/75 were estimated at about 561,000 tons—considerably below the 1973/74 level of 2.0 million tons.

Rice remained the PRC's most important agricultural export in 1974. According to the Food and Agriculture Organization of the United Nations, 1.9 million tons of milled rice were exported (table 2). Hong Kong, Indonesia, Sri Lanka, Malaysia, and Cuba continued to be the major markets, accounting for 66 percent of total PRC rice exports.

Industrial Crops

The United States remained the sole supplier of soybeans to the PRC in 1974, exporting 570,000 tons, compared with 198,000 tons in 1973 (table 1). For 1974/75, the quantity was only 129,000 tons—down from 606,000 tons in 1973/74—because in September 1974, China discontinued soybean imports from the United States, reportedly because of impurities.

In 1974, \$11.7 million worth of U.S. soybeans (49,151 tons) moved ultimately to China in the form of transshipments via Canada. Such transshipments are considered a normal commercial occurrence, and are not generally included in data on direct U.S. exports to China.

The PRC exported 233,000 tons of soybeans to Japan (\$66.4 million) in 1974, compared with 226,000 tons (\$51.5 million) in 1973.

China imported 858,000 bales of cotton from the United States in 1974, up from 635,000 bales in 1973 (table 1). However, on a July-June basis, a sharp decrease was registered. Our 1974/75 cotton exports to the PRC totaled 319,000 bales, which compares with 878,000 bales in 1973/74. China's total cotton imports in 1974 are estimated at 1.8 million bales. For 1974/75, they are estimated to be 850,000 bales, down from 1.6 million bales in 1973/74.

Data on PRC cotton exports are available on an August-July basis. About 100,000 bales each were exported in 1972/73 and 1973/74. For 1974/75, it was reported that about 15,000 to 25,000 bales of cotton were sold by the PRC in Asia and Europe.

Livestock and Livestock Products

In 1974, Hong Kong continued to be China's major foreign market for exports of live animals and livestock products. Exports are preliminarily valued at \$185.6 million and \$57.7 million, respectively. Data on exports of meat and meat products to other countries in 1974 are incomplete or unavailable (table 4).

Trade With the United States

The second full calendar year of two-way agricultural trade between the United States and the PRC came to a close December 31, 1974. Total U.S. exports to China in calendar 1974 amounted to \$807.4 million (table 5). Farm commodities accounted for \$652.2 million worth (81 percent of the total), compared with \$575 million worth in 1973. U.S. agricultural imports from China amounted to \$26.4 million in 1974, compared with \$21.6 million in 1973 (table 6).

Table 1--U.S.-PRC trade, and major agricultural imports of the PRC, calendar years 1972-74 and fiscal years 1973-75 ^{1/}

Item	1972	1973	1974	1972/73	1973/74	1974/75 ^{2/}
<u>Million dollars</u>						
U.S. exports to PRC:						
Total	63.5	689.1	807.4	213.7	1,091.0	435.3
Agricultural	61.3	575.0	652.2	200.0	851.5	320.0
U.S. imports from PRC:						
Total	32.4	64.0	88.3	47.5	86.6	37.2
Agricultural	16.4	21.6	26.4	19.6	23.6	29.1
<u>Million metric tons</u>						
PRC's major agricultural imports:						
and leading suppliers:						
Grain:						
U.S.	0.9	4.0	2.8	1.5	4.8	1.46
Canada	3.7	2.4	2.0	4.4	1.3	2.38
Australia	--	0.8	1.4	0.3	1.2	1.51
Argentina	--	0.1	0.5	--	--	0.69
France	--	--	0.2	--	0.3	0.23
Total	4.6	7.3	6.9	6.2	7.6	6.27
Wheat:						
U.S.	0.5	2.6	1.9	0.8	3.0	1.44
Canada	3.7	2.4	2.0	4.4	1.3	2.38
Australia	--	0.8	1.4	0.3	1.2	1.51
Argentina	--	--	0.1	--	--	0.15
France	--	--	0.2	--	--	0.23
Total	4.2	5.8	5.6	5.5	5.5	5.71
Corn:						
U.S.	0.4	1.4	0.9	0.8	1.8	0.023
Argentina	--	0.1	0.4	0.1	0.3	0.538
Total	0.4	1.5	1.3	0.9	2.0	0.561
Soybeans:						
U.S.	--	0.20	0.57	0.03	0.61	0.129
<u>1,000 bales</u>						
Cotton: ^{3/}						
U.S.	--	635	858	466	878	319
Others	NA	NA	942	1,234	722	531
Total	NA	NA	1,800	1,700	1,600	850
<u>Million pounds</u>						
Tobacco:						
U.S.	--	1.2	2.2	--	3.4	0
Inedible tallow:						
U.S.	--	6.9	40.0	--	46.8	0

-- = None.

NA = Not available.

^{1/} As reported by exporting countries.

^{2/} Preliminary. Based on deliveries, contracts outstanding, and estimates.

^{3/} 480-lb. bales.

Source: Foreign Agricultural Trade of the United States, U.S. Dept. of Agr., Econ. Res. Serv., November 1974 and March 1975; U.S. Bureau of the Census, U.S. Agricultural Exports and Imports; Country Trade Statistics; Bureau of the Census, Monthly Reports-FT990.

Table 2--People's Republic of China: Rice exports,
by major destinations, 1971-74 1/

Destination	1971	1972	1973	1974 <u>2/</u>
<u>1,000 metric tons, milled equivalent</u>				
Hong Kong	111.0	182.1	220.6	220
Indonesia	NA	<u>3/</u> 28.3	<u>3/</u> 470.0	500
Malaysia	84.3	<u>4/</u> 60.5	<u>4/</u> 209.3	200
Pakistan	<u>4/</u> 120.0	17.0	NA	NA
The Philippines	50.0	29.0	<u>4/</u> 160.0	50
Singapore	34.5	38.0	45.4	20
Sri Lanka	129.2	22.7	211.7	155
Other	15.2	16.8	18.0	57
Far East	544.2	394.4	1,335.0	1,202
North America (Canada)	0.1	0.1	0.6	NA
Mid-East	37.8	<u>4/</u> 28.0	<u>4/</u> 45.0	60
Africa	<u>4/</u> 31.0	<u>4/</u> 32.0	<u>4/</u> 180.0	200
Western Europe	12.6	32.3	32.3	30
Eastern Europe	99.2	78.3	<u>4/</u> 121.0	110
Latin America	240.0	250.0	262.0	300
Cuba <u>5/</u>	<u>4/</u> 230.0	<u>4/</u> 230.0	<u>4/</u> 200.0	200
Chile, Mexico, Peru	10.0	<u>4/</u> 20.0	<u>4/</u> 62.0	100
Total	964.9	815.1	1,975.9	1,902

NA = Not available.

1/ Incomplete. As reported by importing countries.

2/ Preliminary.

3/ Including rice imported through Hong Kong.

4/ Partly estimated or unofficial.

5/ Total rice imported less traceable shipments from origins other than PRC.

Source: Food and Agriculture Organization of the United Nations, Rice Trade Intelligence, Feb. 10, 1975.

Table 3--People's Republic of China: Lint cotton imports,
by country of origin, 1971/72-1974/75 1/

Origin	: 1971/72	: 1972/73	: 1973/74	: 1974/75 <u>2/</u>
	:	:	:	:
	:	<u>1,000 metric tons <u>3/</u></u>		
	:			
United Arab Republic	17.0	14.0	7.4	NA
Pakistan	18.1	25.9	2.0	3.5
Syria	15.0	16.3	28.3	1.7
Sudan	37.2	34.2	36.1	NA
East African Community <u>4/</u>	22.6	23.8	45.5	2.2
United States	--	127.8	196.4	27.2
Iran	7.8	43.5	<u>2/</u> 4.4	NA
Brazil	--	29.2	7.8	NA
Turkey	13.7	49.0	12.2	NA
Mexico	15.9	20.7	23.9	NA
Other	2.3	33.6	25.5	2.2
	:			
Total	149.6	418.0	<u>2/</u> 395.5	174.2
	:			

NA = Not available.

-- = None.

1/ Year beginning August 1. As reported by exporting countries. For previous years, see The Agricultural Situation in the People's Republic of China and Other Asian Communist Countries, U.S. Dept. of Agr., Econ. Res. Serv., ERS-Foreign 362, May 1974.

2/ Preliminary.

3/ Converted from 480 lb. bales; 1 ton = 4.592 bales.

4/ Includes Uganda and Tanzania.

Table 4--People's Republic of China: Meat and meat product exports,
by selected destinations, 1971-74 1/

Destination	1971	1972	1973	1974 <u>2/</u>
	<u>1,000 metric tons</u>			
Hong Kong	38.3	38.6	58.7	51.6
Poland	11.8	22.6	15.2	NA
Czechoslovakia	8.0	19.0	14.0	NA
France	19.5	21.7	16.5	<u>3/</u> 11.8
Italy	9.4	14.2	4.4	<u>3/</u> 1.7
Japan	7.2	10.7	14.5	9.2
United Kingdom	7.3	7.4	8.5	<u>4/</u> 1.2
Spain	0.3	9.5	8.8	--
Other <u>5/</u>	3.7	1.1	NA	NA
Total	105.5	144.8	NA	NA

NA = Not available.

-- = None.

1/ As reported by importing countries. For previous years, see The Agricultural Situation in the People's Republic of China and Other Asian Communist Countries, U.S. Dept. of Agr., Econ. Res. Serv., ERS-Foreign 362, May 1974.

2/ Preliminary.

3/ January-June.

4/ January-October.

5/ Countries of the Organization for Economic Cooperation and Development only.

Source: Food and Agriculture Organization of the United Nations, Trade Yearbook, 1971, Vol. 25. Organization for Economic Cooperation and Development, Statistics of Foreign Trade, 1972. Commonwealth Secretariat, Meat and Dairy Produce Bulletin, various issues, 1974 and 1975. U.S. Dept. of Agr., Foreign Agricultural Service, country trade statistics.

Table 5--United States: Agricultural exports to the People's Republic of China, by quantity and value, calendar years 1972, 1973, and 1974 ^{1/}

Item	1972		1973		1974	
	Quantity:	Value	Quantity:	Value	Quantity:	Value
	<u>M. tons</u>	<u>1,000 dollars</u>	<u>M. tons</u>	<u>1,000 dollars</u>	<u>M. tons</u>	<u>1,000 dollars</u>
Wheat	565	35,293	2,649	277,709	1,905	234,015
Corn	376	23,792	1,393	132,384	854	95,671
Tobacco	--	--	1	1,359	1	2,718
Cattle hides, whole	--	--	<u>2/10</u>	244	<u>2/2</u>	30
Sheep skins, w/wool	--	--	<u>2/25</u>	147	<u>2/18</u>	90
Soybeans	--	--	198	43,365	571	126,548
Peanuts	--	--	--	--	negl.	29
Cotton	--	--	<u>3/610</u>	100,527	<u>3/783</u>	185,600
Vegetable seeds, n.e.s. ...	--	--	negl.	43	--	--
Baby chicks, breeding stock	--	--	--	--	<u>2/3</u>	3
Tallow, inedible	--	--	3	1,344	18	7,539
Soybean oil, crude	10	2,200	58	17,863	--	--
Total agricultural commodities	--	61,284	--	574,984	--	652,226
Total nonagricultural commodities	--	2,253	--	114,616	--	155,174
Total exports.....	--	63,537	--	689,600	--	807,400

-- = none. negl. = negligible.

^{1/} Excludes transshipments via Canada.

^{2/} Numbers in thousands.

^{3/} Thousand running bales.

Source: U.S. Bureau of the Census, U.S. Agricultural Exports, country-by-commodity, 12/31/73, 12/31/74; U.S. Bureau of the Census, U.S. Foreign Trade, Highlights of Exports and Imports, FT990-73-12 and FT990-74-12, tables E-3 and I-4.

Table 6--United States: Major agricultural imports from the People's Republic of China, by quantity and value, calendar years 1972, 1973, and 1974

Item	Unit	1972		1973		1974	
		Quantity	Value	Quantity	Value	Quantity	Value
		Thou- sand	1,000 dollars	Thou- sand	1,000 dollars	Thou- sand	1,000 dollars
Meats, n.e.s., fresh, chilled, or frozen: Lb.	--	--	--	428	192	505	274
Poultry egg, not chicken, whole	Doz.	44	40	64	76	106	137
Other fresh, chilled, or frozen vegetable							
tables	Lb.	--	--	448	114	543	157
Garlic, dried, dehydrated	do.	--	--	9	4	827	505
Vegetables, dried, dehydrated, n.e.s.	do.	92	103	100	130	294	263
Other vegetables, prepared or preserved	do.	266	80	503	191	504	194
Mushrooms	do.	137	85	210	120	210	118
Nuts	do.	1,621	566	1,317	773	489	328
Honey	do.	270	61	621	230	946	360
Other cayenne red pepper	do.	289	117	1,571	315	3,133	999
Flue-cured and burley filler	do.	--	--	13	5	436	430
Tung oil	do.	--	--	5,721	705	346	102
Nut oil, not specifically provided for	do.	--	--	--	--	856	204
Macaroni, etc., no eggs	do.	208	53	175	49	473	184
Edible preparations not over 5% butter-							
fat	do.	277	134	322	223	215	190
Feathers, crude, excluding ostrich	do.	416	549	912	1,375	784	1,203
Downs, crude, excluding ostrich	do.	65	186	142	353	233	746
Bristles, crude or processed	do.	1,176	6,741	1,110	5,144	1,129	5,925
Horse mane, tail, hair, n.s.p.	do.	336	635	148	249	147	387
Camel hair, sorted, etc., greasy	do.	387	219	469	334	258	533
Camel hair, scoured, greasy	do.	38	33	--	--	128	110
Hair, cashmere, goat, sorted, greasy ...	do.	201	248	320	473	249	642
Gelatin, inedible, under 40¢/lb.	do.	6,816	873	8,623	1,255	2,971	856
Gelatin, inedible, not under 40¢/lb. ...	do.	--	--	--	--	638	333
Tea, crude or prepared	do.	837	299	1,279	613	2,736	1,017
Cassia	do.	2,563	1,713	1,269	1,051	783	777
Licorice root	do.	--	--	112	17	3,278	417
Licorice extract	do.	--	--	44	18	351	255
Silk, raw	do.	299	2,421	432	4,394	206	2,576
Drugs, natural, crude, vegetable	do.	35	55	20	69	66	209
Drugs, advanced natural vegetable	do.	33	158	61	397	44	309
Anise oil	do.	20	33	60	111	24	114
Cassia oil	do.	79	190	47	145	43	607
Citronella oil	do.	69	70	492	799	424	1,177
Lemon grass oil	do.	4	5	59	93	179	498
Other essential oils	do.	8	457	345	339	799	1,457
Total agricultural commodities	--	--	16,416	--	21,631	--	26,404
Total nonagricultural commodities	--	--	16,006	--	43,269	--	88,296
Total imports	--	--	32,422	--	64,900	--	114,700

-- = None.

Source: U.S. Bureau of the Census, U.S. Agricultural Imports, country-by-commodity, 12/31/73, 12/31/74; U.S. Bureau of the Census, U.S. Foreign Trade, Highlights of Exports and Imports, FT990-73-12 and FT990-74-12, tables E-3 and I-4.

Table 7--United States: Agricultural exports to the
People's Republic of China, fiscal years 1973/74 and 1974/75

Items	1973/74		1974/75 <u>1/</u>	
	Quantity	Value	Quantity	Value
	1,000 metric tons	1,000 dollars	1,000 metric tons	1,000 dollars
Wheat	2,994	317,280	1,441	182,400
Corn	1,759	188,688	23	2,590
Tobacco	2	4,077	--	--
Cattle hides, whole	2	30	--	--
Sheep, lamb skins, with wool	37	195	--	--
Soybeans	606	142,332	129	32,170
Cotton <u>2/</u>	878	187,542	319	102,683
Tallow, inedible	21	8,883	--	--
Soybean oil, crude	7	2,471	--	--
Total		<u>3/851,580</u>		319,843

NA = Not available.

-- = None.

1/ Preliminary.

2/ 1,000 480-lb. bales.

3/ Includes baby chicks (negligible), peanuts (\$39,000), and vegetable seeds (\$43,000). Total values for these items are not available for 1974/75.

Source: U.S. Bureau of the Census, U.S. Agricultural Exports, country by commodity, 7/28/75. U.S. Dept. of Agr., Foreign Agric. Serv., country trade statistics.

In addition to the grain, cotton, and soybeans discussed above, the United States also exported tobacco, sheep and cattle hides, peanuts, baby chicks, and inedible tallow to China in calendar year 1974, at a total value of \$10.4 million. These were sporadic shipments, typically appearing in the trade only once or twice. It is, therefore, impossible to predict what role, if any, these commodities will play in 1975 trade.

Three percent of U.S. agricultural exports, by value, went to China in 1974, about the same as in 1973. In quantity terms, this represented 8 percent of our wheat exports, 3 percent of the corn, 14 percent of the cotton, and 4 percent of the soybeans exports.

Agricultural commodities comprised 23 percent of U.S. imports from China in 1974. They consisted largely of specialty items. Those valued at over \$100,000 are listed in table 6. China supplied less than 1 percent of total U.S. agricultural imports, by value. However, China supplied 90 percent of our imports of scoured camel hair, 80 percent of our dried garlic imports, 73 percent of our anise oil imports, and 64 percent of our total tung oil imports. In addition, China supplied more than a third of the following U.S. agricultural imports, in quantity terms: exotic meats, bristles, cashmere goat hair, raw silk, and lemon grass oil.

China's imports of grain, soybeans, and cotton for 1974/75 were expected to be much higher than they actually were. In the second half of 1974, the PRC deferred or terminated various grain, cotton, and soybean contracts with the United States, Canada, and Australia. Then, in January and February 1975, there were additional terminations of U.S. wheat contracts. As a result, China's total wheat imports from the United States for 1974/75 are estimated at 1.44 million tons—down from an original estimate of 2.35 million tons (table 1).

Contracts for 1 million tons of U.S. corn were terminated in mid-1974, leaving only 23,000 tons exported in 1974/75. Contracts with the United States for about 680,000 tons of soybeans were also terminated in September 1974. Except for about 100,000 tons, shipped in July and August of 1974, no soybean shipments for the PRC were scheduled for the remainder of 1974/75. In February 1975, cotton contracts of 233,000 bales were terminated, leaving, at that time, about 130,000 bales outstanding for 1974/75.

The exact terms negotiated between the PRC and the U.S. shippers at the time of the grain and soybean terminations are not known. However, for the February cotton contract termination, it was reported that the PRC agreed to pay the difference between the contracted prices and the prices at the time of termination plus carrying charges.

A partial explanation behind these cancellations probably lies in the following: (1) The Chinese had a good grain crop in 1974, but the contracts to import U.S. farm products had been made in July of 1974 or earlier, when the Chinese crop outlook was still bleak,

and (2) the Chinese were experiencing a deficit in the balance of trade.

Outlook for 1975

Agricultural policies in the PRC point to a continuation of the present structure of agriculture and emphasis on grain production and capital investments in agriculture. This was further indicated by Premier Chou En-lai's speech to the Fourth National People's Congress, where he predicted that the current 5-year plan (which runs until the end of 1975) would be fulfilled, and announced that China is launching programs to compile the next 5-year plan and a long-range, 10-year plan.

Crop conditions at the end of July 1975 appeared more promising than they did a year earlier. Unprecedented efforts went into preparing for this year's crops. Water conservation, reclamation, farmland improvements (leveling of land, deep plowing, terracing of fields, and increasing the supply of organic and chemical fertilizers), and enlargement of the management force all received special attention. National conferences on cotton, oilbearing crops, sugar, hemp, and tobacco stressed the need for expanded acreage and timely implementation of all farming functions in 1975 to ensure the successful completion of the fourth 5-year plan.

Mild weather facilitated spring farming operations, and most crops were planted ahead of the usual time. Good harvests were obtained from winter-grain crops in the Yangtze River Valley, particularly winter wheat and rapeseed, both on expanded acreage. Transplanting of early rice was satisfactory, despite excessive rain in parts of southeast China. Spring wheat (on enlarged area), miscellaneous grains, cotton, oilbearing crops (also on enlarged area), and other industrial crops were planted on time. These crops are growing well, largely because of widespread, above-normal rainfall about mid-April, which followed periods of dry weather earlier in the spring in much of the area north of the Huai River.

Through July 1975, precipitation varied considerably from generally normal to above normal south of the Yangtze River and from normal to below normal to the north. Soil moisture has been below normal in some parts of southwest and northwest China and in Central Manchuria. These are marginal producing areas, and the moisture deficiency does not appear to be serious.

The winter wheat harvest is completed, and major producing Provinces have reported bumper crops, with increases in yield and output. Below-normal rainfall prevailed in spring wheat areas starting in January, but timely precipitation at the end of June and the beginning of July may result in a crop equal to the 1973 level. Prospects for early rice also are good.

Growth of other major crops has progressed satisfactorily, but may have slowed slightly in some areas in the north because of below-normal precipitation.

Assuming continued favorable weather, another good harvest for all crops is in sight for China in 1975, at least equal to those of the past 2 years, and probably larger.

Given the good crops in 1974 and possible success in agricultural production in 1975, the PRC probably will continue its prudent importing pattern for grains and other farm products at lower levels than in 1973-74. The wheat contracts with Canada and Australia concluded in early 1975 were below or near minimum requirements under the long-term agreements, and delivery dates have been extended. At present, the

PRC does not have outstanding contracts for wheat, corn, soybeans, or cotton with the United States for 1975/76. Unless unfavorable weather occurs in late 1975 to drastically change the outlook for the PRC's major crops, total quantity and value of farm imports from the United States are expected to drop sharply in 1975 and 1975/76.

China already has long-term contracts for grain imports at a nominal level for the next 2 years. The purchase of chemical fertilizer plants is part of an overall program aimed to bring about self-sufficiency in food crops in the late 1970's or the early 1980's. If corresponding successful programs can be achieved in water conservancy and land reclamation, the PRC will have moved nearer to the goal of self-sufficiency in grain production.

MONGOLIAN PEOPLE'S REPUBLIC

The current 5-year plan (1971-75) for the Mongolian People's Republic envisages a 22- to 25-percent increase in gross agricultural production in 1975 as compared with 1970. Reports indicate that 1974 production moved the country closer to that goal. The 1974 increase in total economic growth, of which agriculture contributes the major share, amounted to 5.9 percent, 0.4 percent above the average of the past 4 years.

Despite unfavorable summer weather in some areas, Mongolia produced about 370,000 tons of grain in 1974—well below the unprecedented production in 1973 but still up to the standard of the past several years.

In the vital livestock sector, Mongolia's herdsman raised nearly 8.9 million head of young livestock, compared with 8 million in 1973 and 7.9 million in 1972. The increase in young livestock numbers brought the total livestock population to more than 24.3 million head. After some stagnation in the 1960's, the livestock sector has shown renewed growth, as indicated in the following tabulation, calculated on the basis of the totals given for 1974 and anticipated for 1975:

Livestock	1971	1974	1975 goal
	Millions	Millions	Millions
Sheep	13.02	14.11	14.50
Goats	4.41	4.77	4.90
Horses	2.32	2.52	2.60
Cattle	2.02	2.19	2.26
Camels	0.67	0.72	0.74
Total	22.44	24.31	25.00

Mongolia derives about 60 percent of national income from the livestock sector.

Compared with 1973, annual losses of livestock

were greatly reduced in 1974. The goal for the 5-year plan is to increase total livestock to 25 million head by 1975. To promote continued growth, pastures are to be increased in 1975 by 3 million hectares.

The production achievements of 1974 can be attributed to improved conditions in both the crop and livestock sectors. Mongolia's farmworkers increased the number of heated livestock shelters to 50,000 and the number of wells used for watering livestock to 21,000. Partly as a result, losses of livestock were reduced by nearly 30 percent, compared with last year. To facilitate crop production, nearly 60 agricultural machine repair workshops were at work at year's end. Basic farming work according to reports is now fully mechanized.

In foreign trade, Mongolia continued to export live animals, wool, and meat for primary imports of tea, flour, raw sugar, and consumer goods. Most of Mongolia's trade is with the Soviet Union (76 percent in 1973, including 68.9 percent of exports and 81.2 percent of imports) and other members of the Council for Economic Mutual Assistance (CEMA). For 1974, the volume of trade increased 11 percent over 1973. Exports of camel hair and cashmere to the United States amounted to \$1,360,000, up from last year. Internal trade also advanced. The sale of meat and meat products within the country has increased 30 percent in the past 3 years.

In preparing for 1975, the country's farm associations will be stockpiling twice the amount of silage as in 1974 to ensure supplies to large, newly constructed dairy farms. Completion of the current 5-year plan sets a target of increasing the gross volume of agricultural production in 1975 some 10.2 percent, which will require the raising of a record high 9 million head of young livestock. As has been the case in recent years, nearly 30 percent of capital investments into the national economy will be directed into agriculture.

NORTH KOREA

Both the economy and the agricultural sector of North Korea were strengthened significantly by increased output in 1974. Agriculture may have experienced its best year ever, following good crops in 1973, a shortfall in 1972, and several years of mediocre output. Although the country is more advanced industrially than most of its Asian neighbors (excluding Japan, Taiwan, and South Korea), agriculture and related enterprises made a substantial, but not the major, contribution to national income.²¹

Fragmentary press information indicates that 1974 accomplishments in some sectors of agriculture exceeded goals established in the 6-year plan (1971-76). This progress occurred, according to official statements, under adverse weather conditions, including drought early in the cropping season and heavy rains at harvest time. However, the effects of drought have been reduced substantially by irrigation systems, which have covered the entire country for several years.

Production of the two major grain crops, rice and corn, reportedly attained record levels in 1974. Yields of 5.9 tons per chongbo for rice and 5 tons for corn were claimed.²² As in past years, only a total "grain" production figure was given. This figure varied from 5.2 million²³ to 9 million tons during the 1974 harvest season.²⁴ No official claims have been made since January 10, 1975, when Premier Kim Il-song stated at the Agricultural Congress that 1974 grain production exceeded 7 million tons and was equal to the 6-year plan goal for grain. Earlier, other officials told visitors that the figure was 6.4 million tons, and that 5.5 million tons was the previous record, although no year was identified. Premier Kim Il-song's claim for 1974 grain production compares with claims of 4.8 million tons in 1961, 5 million in 1963, 4.8 million in 1964, and nearly 5 million in 1970.²⁵

²¹In 1959, industry's share of the national income was 51 percent. Since then, the industrial base (particularly heavy industry) has increased more rapidly than agriculture. "Chollima Korea in the Phase of Completing Industrialization," *Nghien Cuu Kinh Te*, Hanoi, No. 76, Nov.-Dec. 1973, pp. 33-46, in *Translations on North Vietnam*, No. 1519, U.S. Joint Publication Research Service (JPRS) 61391, Mar. 5, 1974.

²²The chongbo is the designated unit of land in North Korea. It is equal to 0.99174 hectares or 2.45 acres.

²³A *Nodong Sinmun* editorial, Pyongyang, Nov. 27, 1974, said "65 counties will turn out more than 80,000 tons," and in an accompanying enumeration showed 10 counties producing 150,000 tons each; 24 counties with 100,000 tons each; and 31 counties with 80,000 tons.

²⁴Pyongyang KCNA radio, Dec. 1, 1974, quoted the Supreme People's Assembly as claiming over 9 million tons of grain production in 1974.

²⁵Chollima Korea in the Phase of Completing Industrialization. "Nghien Cuu Kinh Te, op. cit., p. 10.

Crop Production

Two factors are important in assessing North Korea's claimed 1974 grain production—an increase of 30 percent over the 1973 level.

First, a fervor for reaching the 1976 grain production goal in 1974 was touched off by the jubilant announcement at the National Agricultural Congress on January 4, 1974, of an "unprecedentedly rich harvest in 1973" following the poor harvest in 1972. This successful output, under weather conditions "more inclement than in any preceding year," prompted the delegates to "carry out a struggle to triumphantly scale the grain height of the 6-year plan in the new year" (1974). The delegates also pledged to bring about a great upsurge in every aspect of agricultural production—all of which is reminiscent of the attempt by the Chinese to complete their second 5-year plan (1958-62) in just 2 years with the Great Leap Forward.²⁶

Second, and more important, is the North Korean method of classifying grains. North Korea's Central Yearbooks include the following as grains: rice, corn, wheat, and barley²⁷ miscellaneous grains (millet, sorghum, oats, buckwheat, field beans, and peas); and soybeans. There are indications that at times, potatoes have been aggregated with the total grain figure.²⁸ The lack of information on specific grains and the absence of conversion factors to obtain a composite grain figure in Western terminology leaves unanswered the make-up of North Korea's grain production in 1974 and in previous years.²⁹

Rice and corn are the two grains that respond best to North Korea's soils and cultural practices. Development plans called for these crops to constitute 80 percent of total grain production in 1961 and 91 percent by 1967. Probably neither goal was attained within the time frame specified, but it is possible that with the special emphasis given rice and corn, the first goal may have been attained in 1974.

Rice generally has been considered to account for about half of North Korea's grain production, even in recent years, as total grain production has increased.

Corn production has developed more rapidly than that of any other crop—because of irrigation of much

²⁶*Nodong Sinmun*, editorial. "Our warm congratulations on the National Agricultural Congress," Pyongyang radio, Jan. 4, 1974.

²⁷Wheat and barley are included together in North Korean statistics because they are winter crops.

²⁸If the practice of combining pulses and soybeans, and possibly potatoes, in the total grain figure is not taken into account, a distorted figure of grain production in Western terminology is possible, thereby inflating total grain output.

²⁹Probably the last official breakdown of grains by North Korean officials was in the Central Yearbook of 1960.

of the drier, inland cultivated areas, which formerly produced millet and other minor drought-resistant grains. Corn has replaced millet as the major dry-field grain. By 1974, corn probably comprised almost a third of the country's grain production.

Soybean production was trending upward during the years of available statistics. Production of pulses, wheat, and barley has remained about static, although there may have been a slight increase in 1974.

Based on the relationship of the various grain crops to total grain production, as given in the 1959 Central Yearbook, and applying a weighting value to account for the changing emphasis on certain grains, especially rice and corn, the 1974 claim for total grain (7 million tons) can be divided as follows: rice, 3.5 million tons; corn, 2.2 million tons; other food grains (wheat, barley, and miscellaneous grains), probably about 600,000 tons; and pulses and soybeans together, about 700,000 tons. If potatoes have been included in the 7-million ton figure on a grain-equivalent basis, production of the other crops would be reduced accordingly.

Policy and Agricultural Inputs

No major policy changes affecting agricultural production were noted during 1974. Administration of the collectives was strengthened with the ongoing consolidation of collective farms. Considerable progress was made in organizing "county cooperative farm management committees" to direct and coordinate production within collectives. By this method, the Government hopes to eliminate class distinction between peasants and other working classes, to convert collectives' property into all-people's property, and to bring agricultural management nearer to the levels of industrial management. Cropland in North Korea is limited—there are only 1.7 million hectares, excluding orchards and nurseries.³⁰ Because of multiple-cropping and interplanting, however, sown area equals about 2.5 million hectares.³¹ Special efforts to increase the sown area include two projects. The first involves reclaiming 100,000 chongbo from western tidelands in the next plan period (supposedly after 1976), although some of the land (about 8,000 chongbo) has already been reclaimed. The second project, planned for a future economic period, calls for reclaiming an additional 200,000 chongbo of tidelands along North Korea's 520-kilometer western coast.

Four factors have made it possible for North Korea to increase grain production: irrigation, mechanization, electrification and fertilization.

Irrigation is essentially completed. Mechanization of agriculture is about 50-percent complete (although some farm operations are fully mechanized). The countryside is almost totally electrified for lighting, heating, and furnishing motive power for many mechanical operations. Production capacity of chemical fertilizer, probably in excess of 1.5 million tons, is still being expanded.³² The Government policy of supplying the lion's share (over 60 percent) of capital construction funds for agricultural development and elimination of the agricultural tax years ago, accounts for much of the success of these programs.

Because North Korea's soils are so shallow, lack humus, and are naturally infertile, huge amounts of fertilizer are required to obtain satisfactory crop responses. For example, it was claimed in 1969 that 674 kilograms of chemical fertilizer per chongbo were applied to wet rice fields and 478 kilograms to selected dry field crops. In 1974, the amount available averaged about 500 kilograms per chongbo for all crops. However, larger amounts were undoubtedly applied to rice and corn. The plan for 1975 calls for 1 ton per chongbo to attain the output of 8 million tons of grain.

During 1974, between 70,000 and 80,000 tractors (standard 15 h.p.) were said to be available to agriculture. This is an average of 4 tractors for each 100 chongbo in the plains areas and 3 per chongbo in intermediate and mountain areas. Major mechanical operations included ploughing, rice transplanting, harvesting, and threshing. In 1975, all corn was to be transplanted mechanically after seedlings had been germinated in a humus cake. All rice is to be mechanically planted and topdressing of fertilizer and chemical spraying are to be mechanized. The addition of mechanization is intended to make life more enjoyable for the "overburdened" peasants.

Livestock

North Korea's livestock industry has been slow in developing, largely because of poor animal husbandry management and heavy destruction of livestock during the Korean Conflict. The rapid development of mechanization, particularly for the heavier mechanical operations, and the expertness of the Korean fishermen in providing animal food from the sea, have also impeded progress in the livestock industry. The production of meat animals, of which hogs are the most important, still lags behind the fishing industry in supplying animal protein for human consumption.

³²An additional capacity to produce 360,000 tons of urea per year at the Hungnam fertilizer complex (now with a million-ton capacity) is scheduled for completion in Oct. 1975. By 1970, North Korean officials claimed a capacity of 1.5 million tons. The capacity has been increased considerably since then for all types of chemical fertilizer.

³⁰Premier Kim Il-song's interview, June 2, 1974, with the Chief Editor of the Peruvian Newspaper, *EXPRESO*.

³¹The goal of sown area for 1967 was 2.5 million chongbo. Additions since then have been minimal.

light of available information on the country's livestock industry. The goals for milk and wool illustrate the infancy of those sectors of the animal

industry. It does not yet appear that the animal base is large enough to fulfill the goals on a continuing basis.

DEMOCRATIC REPUBLIC OF VIETNAM

Economic Highlights of 1974

The economy of the Democratic Republic of Vietnam was still in transition during 1974, the first year of a 2-year rehabilitation program designed to rebuild the economy to the pre-Indochina War level. That goal is to be completed by the end of 1975 in preparation for the launching of the second 5-year plan. An analysis of the major results of the rebuilding effort in 1974, as reported to the National Assembly in late November 1974, indicated that the economic plan "...has been advanced fairly satisfactorily in many respects."³³

Symptomatic of the stagnant state of the economy were the continued deficit in agricultural output (although progress was registered), large imbalances in foreign trade, subpar industrial capacity, deficiencies in the raw materials base, and the mediocre level of management at all levels of the economy. Economic aid and assistance counterbalanced some of the inherent weaknesses in the economy.

A general overview of the various sectors of the economy at the end of 1974 disclosed that basic industries such as coal, power, chemicals, cement, iron and steel, machinery, textiles, construction (of houses, schools, and hospitals), and some handicraft industries still lagged behind prewar levels. Although the capacity of some of these industries was claimed to have been expanded—to above prewar levels in various instances—there was no claim that production was up to capacity levels. Success continued in the restoration of communications and transportation. Output exceeded prewar levels for some foodstuffs, industry products, and consumer goods such as salt, seasoning, alcohol, beer, tea, cigarettes, matches, soap, and some handicraft products. But in the main, "the foodstuffs industry has not yet developed vigorously. The production rate of a number of consumer goods industries is still low."³⁴ The machinery industry was developing slowly, and "no particular progress has been recorded in the lumber industry."³⁵

Since North Vietnam is primarily an agricultural nation—at less than a subsistence level of output—deficiencies in almost any of the economic sectors affect agriculture. It was evident from the

tone of the National Assembly and the far larger goals set for both agriculture and the rest of the economy in 1975 that North Vietnam faces a monumental task of moving the economy sufficiently forward this year to attain the desired base upon which to launch the second 5-year plan.

The situation in agriculture in 1974 was somewhat brighter than in 1973, but few claims were made indicating that production had surpassed prewar levels. Weather was more favorable for crop production than in 1973, particularly during the second half of the year. But shortcomings occurred, primarily because poor management resulted in improper planning and execution of plans at local levels of production. Little progress was made in implementing the new program for developing agricultural zones and transferring peasant families from the lowland delta areas to the new zones in the upland and mountain areas. Only modest success occurred in the programs to consolidate collective farms to ensure better utilization of limited resources and trained cadre—a scarce item the past few years. The official assessment was that "...no broad comprehensive change has yet been made in agriculture . . . the building of the material and technical facilities for agriculture is still slow and cannot meet requirements. Wasteland reclamation, expansion of the cultivated areas, and afforestation are also slow These shortcomings have limited results of agricultural production in 1974."³⁶

Crop Production

Total crop production in 1974 increased significantly over the mediocre 1973 output though this is still below the past record level. The largest increases occurred in rice and tuber crops, principally sweet potatoes (a claimed record). Increases were claimed for vegetables, pulses, and some industrial crops. The early rice crop (comprising the traditional fifth-month crop and the high-yielding spring rice crop) was good, but probably not up to the 1973 level, partly because of a decline in acreage. On the other hand, the larger, late rice crop (comprising the traditional tenth-month crop and other new, high-yielding varieties harvested in the fall) was good, but not a record crop.

Officials claimed that rice output rose 21.4 percent over the 1973 level. Because of this, it is increasingly evident that the 1973 rice crop was even smaller than

³³Vice Premier Le Thanh Nghi's report at the opening meeting of the National Assembly, Hanoi, Dec. 25, 1974.

³⁴Ibid.

³⁵Ibid.

³⁶Ibid.

Current figures are not available for livestock in North Korea. During 1949-63, when information was published, mixed progress was registered. The number of cattle and horses declined, but hog, sheep, goat, and poultry numbers rose rapidly, with hog numbers increasing over 70 percent and the number of chickens more than doubling. Claims of greater availability of certain types of meat, particularly pork and poultry, indicate a continued increase in numbers of those categories of livestock. Although dairy cattle are fairly insignificant in North Korea, their numbers have probably risen. It is unlikely that the number of native Korean cattle has increased, unless they have been developed either for milking or for beef through crossbreeding. Their use for draft power, as well as that of horses, has diminished with the increase in mechanized farm operations.

The most recent innovation in livestock raising is collective enterprises for hogs, poultry, rabbits, and dairy cattle. Pig farms predominate. The Government's aim is to automate the functions associated with caring for livestock. Efforts to increase livestock numbers through collectivization have not been popular, and most livestock in North Korea are still privately owned.

A substantial effort was made in 1974 to increase meat production. It was claimed that collective farmers boosted meat supplies 40 percent, but no figure of attainment was given for the private sector. Total supplies would not have increased materially without a substantial increase in the private sector, which probably did not happen.

The silkworm industry has developed rapidly. Silk has become an increasingly important export item.

Trade

Until recently, North Korea's foreign trade was confined to a limited number of items, and trading was mostly with other Socialist countries. The trade balance generally showed a small surplus. Between 1960 and 1971, total trade turnover almost doubled, from an estimated \$450 million in 1960 to about \$850 million in 1971. Over half of the trade was with the USSR, a third was with other Communist countries, and about 14 percent was with non-Communist countries. During the past few years, efforts have been made to establish trade relations with non-Communist countries, particularly Japan and Hong Kong and many of the so-called Third World countries. Although trade in agricultural products is small, it is important relative to total trade.

With the increase in rice production, this commodity has become a major agricultural export. Tobacco, fruits (especially apples), and some processed animal products and vegetables are also exported.

The major food import is wheat, with imports ranging from 300,000 to 500,000 tons annually. Other

imports include sugar, cotton, rubber, vegetable oils, animal fats and oils, and preserved vegetables.

The volume of both imports and exports of agricultural products is expanding, and routes of trade are changing. Contracts were signed in 1974 to ship 200,000 tons of rice to Indonesia. A 3-year agreement with Argentina, signed in 1973, called for annual imports of 500,000 tons of corn and 300,000 to 500,000 tons of wheat. Sketchy reports from Argentine sources indicate, however, that the amounts imported by North Korea in 1974 included no corn and only about 150,000 tons of wheat. Available estimates for 1975 shipments indicate that wheat imports from Argentina will decline further, probably to not more than 100,000 tons. North Korea's tight foreign exchange position and the improvement in grain production probably account for much of this decline. Incomplete returns from trading partners indicate a continuation of increased volume of trade in nonagricultural products, however.

Outlook

At mid-year, the outlook for agriculture in North Korea in 1975 was promising. Weather during the spring was favorable to cropping activities—temperatures were above normal and precipitation during the winter had replenished soil moisture to about normal. Also, under the present regime, there appears little likelihood of social or policy changes that would upset agricultural operations during the coming cropping season. As long as present circumstances continue, there is little doubt that agricultural production will increase in 1975.

The country's leaders and peasants are geared to as rapid expansion as possible, according to official media. The question is whether the effort expended will be sufficient to reach the ambitious goals—such as production of 8 million tons of grain.

To reach this goal will require a substantial increase in inputs, principally chemical fertilizers. Although fertilizer capacity rose in 1973 and 1974, the major effort to increase chemical fertilizer production will not bear fruit until the expanded chemical complex in western North Korea has been completed in October 1975. Another major goal is to advance mechanization to the level that the entire rice crop can be both mechanically transplanted and harvested.

Other goals for 1976, but with a 1975 deadline, include 6.9 tractors per 100 chongbo—more than the U.S. ratio of tractors to cultivated land; 5 million tons of fish and marine products; 3 billion eggs; 400,000 to 500,000 tons of meat; 60,000 tons of milk; and 2,500 tons of wool.

The magnitude of these goals, particularly those associated with livestock and livestock products, such as eggs and meat, appear overly ambitious in

previously estimated. By applying official plan data for the 1974 rice crop and claims for the production of that crop, the 1973 rice crop is estimated at slightly less than 4 million tons and the 1974 crop, at just over 4.8 million tons. Rice crops for the past 5 years are estimated as follows, in thousands of tons:

Year	Rice
1970	4,200
1971	3,500
1972	4,660
1973	4,000
1974	4,840

Claims for other crops were vague as to volume of output, but there is little doubt that the Government is again pursuing a program of diversification similar to the one in the first 5-year plan (1961-65), when attempts were made to increase the proportion of subsidiary crops (corn, beans, manioc, and sweet potatoes) and vegetables in an effort to add more variety and nutrition to the diet and to bring larger amounts of land into cultivation in the upland and mountainous areas.

Special emphasis was directed to expanding the acreage of corn, North Vietnam's second most important grain, during the rehabilitation period. Eventually, the present acreage is to be more than doubled, and production is to reach more than 1 million tons annually. Despite the importance attached to this program, no reports have been noted on its progress during the last 2 years. Corn has not been a successful crop in North Vietnam. Its future development will depend largely on the success of the ongoing program of developing agricultural production zones in the higher, interior areas of the country.

Of the other crops, sweet potato production reportedly set a record in 1974, apparently exceeding the 1.2 million tons claimed for 1965. Not enough information was available to assess the status of manioc, beans, industrial crops (cotton, tea, coffee, tobacco, and tropical fruits), oilseeds (primarily peanuts), and soybeans. The National Assembly report stated that the cultivation of subsidiary crops and industrial crops had not been given due attention and that planned norms for these crops could not be reached in 1974.

Livestock

The lack of feed, shelter, and technical guidance and the inability to control diseases have continually plagued and limited the progress of animal husbandry in North Vietnam. These problems persisted in 1974. In 1974, hogs registered some increase in numbers, but the goal of 6.2 million hogs for 1974 was not reached. In mid-1973, an official report claimed that hog numbers had surpassed 5.5

million. Other small livestock (sheep and goats) are insignificant in North Vietnam, but poultry is increasing in importance.

A major reason for the slow progress in increasing the number of hogs seems to be incentive. One report indicated that 15 percent of the peasant families do not raise any hogs and that only 55 percent raise an average of one hog per year. Also, the low level of production is a factor. In the midland areas, 1.6 litters are produced per year and in the plains area, the number is 1.2 litters per year.³⁷ Officials estimate that if each peasant household raised 3 pigs per year, the country could raise 9 million hogs a year.

The number of buffaloes probably increased slightly in 1974. But there was no information indicating that the downward trend in cattle numbers that began in 1959 had been reversed in 1974. Some progress is being made in developing dairy type cattle, particularly in areas adjacent to cities. This may be an indication that the program to attempt to increase cattle numbers may focus on dairy cattle rather than on the all-purpose (work-type) breed, which has been declining in numbers for several years.

Policy and Agricultural Inputs

No significant changes were made in agricultural policy in 1974. The main Government effort was to encourage the population to support the rehabilitation plan outlined by the Twenty-Second Plenum of the Vietnam Worker's Party Central Committee in 1973. This plan was adopted to raise the economic level of North Vietnam to a predetermined base upon which the second 5-year plan is to be established. Basically, the rehabilitation program was to restore all sectors to the prewar (1965) level or above. Greater efforts were made in distributing essential capital and consumer goods and prices were stabilized, with reductions for some. Greater emphasis was placed on education, birth control, labor productivity, the value of socialist large-scale production, and improved management at all levels of production. The shortcomings of the economic rehabilitation program during the past 2 years are reflected somewhat in the many unrealistic goals for 1975.

There was no clearcut information on the kind and amount of inputs provided agriculture in 1974. Water conservancy programs focused on repair and restoration of facilities damaged during the war. Much of the effort in land reclamation went to filling bomb craters and restoring irrigation facilities destroyed by flooding in 1973. Very little new land was added to the cultivated area. Production of machinery for agriculture was inadequate, chemical

³⁷The rate of growth also is slow. One-year-old hogs average about 40 kilograms.

fertilizer and other agricultural chemicals were insufficient, and other needs of agriculture were not met. Much of the chemical fertilizer capacity was restored, but too late in the year to fulfill all needs.

A report issued in late 1974 by the Lao Dong Party Central Committee Secretariat pointed out that progress in agriculture remained slow and slackened in some respects. The following shortcomings were cited. Productivity in the output of many commodities did not increase in 1974, or increased very slowly. Cultivated area was down.³⁸ Agricultural production did not meet the people's demands for grain and food, and failed to provide sufficient raw materials for industry. The volume of agricultural products available for export had remained "unsubstantial." The organization of agricultural production and management was highly decentralized, and the new production relations have not been consolidated. Some farmers were still working on an individual basis, and production in most cooperatives (collectives) was still decentralized.³⁹

Level of Consumption

Although agricultural output in 1974 exceeded that of the previous year, the availability of food during the first half of 1974 probably was not as large, because of the shortfall in the 1973 grain crop. Food shortages may have occurred in some areas. Imports of food remained at a high level, and for some items, they probably increased. In the report of the Central Committee Secretariat, it was stated that natural calamities in 1971 and 1973 caused the loss of more than 1.5 million tons of rice.⁴⁰ A grain loss of this magnitude on top of the usual deficit level of production continued to place extremely heavy reliance on food imports and has further complicated the problems of distribution.

There appears to have been little change in the food intake of a few years ago: 1,800 to 1,950 calories daily, from a diet comprised of about 80 percent starch foods, primarily grain. Officials recognize the need to increase the production of pulses and other high-protein crops, vegetable oilseeds, and fruits and vegetables. The production of vegetables has been increased around population centers in the last few years. Intake of animal protein, a high percentage of which is supplied by marine products, particularly in the coastal and low-lying areas, is extremely low.

Agricultural Trade

North Vietnam's foreign agricultural trade is weighted heavily in favor of food imports. Although

no official figures are available, other sources, including trading partners, indicate that foreign trade of agricultural products is expanding, but the agricultural trade balance continues to be in deficit. Recent information indicates that imports of food during and after the Indochina War accounted for more than the 10 percent of food consumption claimed officially. A more realistic estimate is at least twice that much, possibly even higher, since "the rate of grain production has not caught up with the population growth."⁴¹ Continued imports will be necessary for several years to bridge the supply-demand gap.

As indicated in table 8, rice is the predominant import, followed by wheat flour, sugar, cotton, processed dairy products, animal fats, and rubber. Exports of rice, bananas, tea, peanuts, raw sugar, and other tropical products fell far short of equalizing necessary imports of food products.

As the country gears up for the new 5-year plan, some goals have been mentioned. Production of grains and other crops is to be accelerated so that in 3 to 4 years, domestic production can provide for the food needs of the population.⁴² Other goals include supplying increased raw farm materials to factories and having enough exports in 5 or 6 years to equal or surpass the value of needed agricultural imports.⁴³

Outlook

As of the end of March 1975, the outlook for the current crop year in North Vietnam was more promising than a year earlier. Two major reasons for this are the good crop production in 1974 and improved weather conditions. One major drawback was the delayed harvest of the 1974 late rice crop, which delayed the fall and winter soil preparation and planting of subsidiary crops and the fifth-month rice crop. Following prolonged and heavy rain in January, the weather turned favorable with fairly clear skies and above normal temperature, thus accommodating an upsurge in farm work and planting. The area of some subsidiary crops was increased, but the acreage goal of the early rice crop may not have been fulfilled on schedule.

The 1975 goal is to increase the value of agricultural production by 8.6 percent over 1974 (6.5 percent for crops and 16 percent for livestock), and to increase the production of grain by 5 to 6 percent. The production of subsidiary crops is to increase 40 percent in 1975, indicating a return to the policy of the first 5-year plan of increasing subsidiary crop (corn, beans, sweet potatoes, and manioc) and industrial crop (soybeans, oilseeds, cotton, sugarcane, tobacco, and tropical crops) production in the upland and

³⁸Vice Agricultural Minister, Nguyen Choung, in another report put the figure at 100,000 fewer hectares.

³⁹*Hoc Tap*, No. 10, 1974.

⁴⁰*Ibid.*

⁴¹*Ibid.*

⁴²Specific foods mentioned include grain, vegetable oil, vegetables, meat, fish, eggs, sugar, and fruit.

⁴³*Hoc Tap*, No. 10, 1974.

other areas where rice produces inferior yields. The two crops which will receive special attention in 1975 are corn and sweet potatoes, especially in the upland areas. Offtake from subsidiary and industrial crops is to swell the export volume, thereby increasing the export index by 30 percent.

The weakest link in North Vietnam's agriculture is livestock. For 1975, the plan calls for only a 3-percent increase in the number of hogs but a 14-percent increase in the production of meat. A slight increase in water buffaloes, milk cows, and milk buffaloes is also planned. Efforts were to be made to prevent any decrease in the number of oxen. Sizable increases are expected for poultry and fish, especially in areas of

brackish water.

North Vietnam stands a better chance of increasing agricultural production in 1975 than in 1974, assuming normal weather. Two major inputs, irrigation and chemical fertilizers, appear to be more plentiful. Mechanization, although minimal, has increased and the level of management has improved somewhat. The technical services field is the least developed, both with respect to plant and livestock breeding, and in the care and protection of livestock. Although many of the goals set for agriculture in 1975 appear quite reasonable, they depend on a very narrow margin of human endeavor and weather fluctuations.

Table 8--North Vietnam: Major agricultural imports and exports,
1961-65 average, annual 1968-73

Commodity	1961-65 average	1968	1969	1970	1971	1972	1973
		<u>1,000 metric tons</u>					
Imports:							
Grains	49.6	1,375.7	1,602.5	1,481.8	1,668.5	1,377.8	1,749.1
Rice <u>1/</u>	18.0	1,040.0	1,290.0	890.0	1,250.0	1,100.0	1,400.0
Wheat and flour <u>2/</u> ...	13.7	335.7	312.5	591.8	418.5	277.8	349.1
Sugar, raw	<u>3/</u> 26.2	51.0	60.0	57.6	92.3	81.1	86.8
Animal fats	0.4	2.5	2.0	2.0	2.0	2.0	1.9
Coconut oil	NA	1.4	0.3	0.6	1.5	1.5	1.8
Milk, condensed	NA	0.9	1.2	1.0	0.8	0.8	0.9
Milk, dry	NA	0.4	1.0	1.0	1.0	0.4	0.4
Cotton	1.1	3.0	3.0	3.0	3.0	3.0	3.0
Rubber, natural <u>4/</u> ...	2.6	1.8	1.5	1.0	1.0	1.0	1.0
Exports:							
Rice	10.9	2.4	20.1	18.5	20.0	20.0	20.0
Bananas	7.4	0.6	0.4	2.6	2.4	2.5	2.5
Tea	0.8	1.8	1.6	1.8	1.7	1.8	1.9
Peanuts (shelled)	2.0	1.4	1.1	3.5	2.0	1.0	1.0
Oilseed cake	0.4	0.5	0.4	0.7	0.8	0.8	0.8
Sugar, raw	NA	3.7	6.8	2.0	15.0	10.2	10.9
Sweet potatoes	NA	0.3	0.3	0.4	0.4	0.7	0.8
Peanut oil	NA	0.5	0.9	1.2	1.4	1.5	1.5
Coffee	NA	1.5	1.5	1.8	1.5	1.5	1.5

NA = Not available.

1/ This is a new series compiled by the Food and Agriculture Organization of the United Nations. It appears more reasonable than official claims of food imports, which are considerably smaller. Imports in 1974 probably were close to those in 1973. The 1961-65 average is from FAO's old series.

2/ In wheat equivalent.

3/ Average for 1962-66.

4/ Average for 1964-66.

Source: The Food and Agriculture Organization of the United Nations, Rome: Trade Yearbook, Vol. 27, 1973.

APPENDIX

Statistics on Chinese agricultural production and related data have been scarce since 1949, when Communist rule began. However, for 1949-57, the PRC Government published various general statistics in one volume. (For sources and references in this section, see footnotes to app. table 1.) The practice continued in 1958 and 1959, but with highly inflated estimates, and was then discontinued by the PRC Government. The overestimation for 1958 was the result of political pressure. Moreover, some grains were not harvested that year. The 1959 estimate of grain production was actually the planned figure. For 1960-69, the PRC Government released only general statements regarding the grain harvests, without making reference to numbers, and only occasionally mentioning percentage comparisons. Since 1970, annual total grain production has been announced or alluded to in official PRC statements, so that estimates could be derived.

The agricultural statistics for 1949-57 published by the PRC Government were by and large considered acceptable by the researchers on China in the West. However, it was recognized that the data might not be accurate for the earlier part of the period, particularly for 1949-52, when the country was recovering from World War II and civil strife.

The Economic Research Service (ERS), U.S. Department of Agriculture, in 1958 started to make independent estimates of Chinese total and individual crop production, and also revised downward the inflated PRC grain production figures for 1958 and 1959. The ERS estimates were periodically adjusted as additional information became available. Because of the absence of information regarding the overall Chinese economy, as well as the agricultural and related sectors, the ERS estimates were based on information available in and before 1957 and the limited information that leaked through Hong Kong after 1957. Estimates were made by adjusting downward or upward from estimates for the previous year, using 1957 as the point of departure. While this method was admittedly

not ideal, it provided the best educated guesses under the circumstances.

Since 1970, the PRC Government has consistently reported total grain production. The data appear to be a continuing series, and ERS has adopted, with reservation,⁴⁴ these officially claimed production estimates of grains and other major crops, including the series dating back to 1949. Using the PRC data, ERS has attempted to adjust ERS estimated production of major grains to match the total PRC grain figures. For years in which official estimates were not available, or could not be constructed from official statements (as is the case for 1966, 1968, and 1969), or were overstated (as in 1958 and 1959), interpolations were made based on estimates by researchers on China. Estimates for 1960 through 1965 were derived from official statements, and the seemingly optimistic estimate for 1967 was mentioned by Anna Louise Strong.

Appendix table 1 presents the ERS and estimated PRC series on total and individual grain production for 1949-74. Data for 1949-58 are identical in the two series, but estimates by ERS have been revised upward to the PRC claims for 1970-74. Further, in the absence of official claims for individual grain production, the production of rice, wheat, miscellaneous grains and tubers has been derived by using the same proportion to the total grain as that in the ERS series. This method obviously has weaknesses because accounting for shifts in crop production from year to year cannot be accurately made under conditions of official statistical blackout. Revisions will be made as more reliable information becomes available.

⁴⁴Official estimates are viewed by ERS analysts as on the high side, since they are likely weighted by the PRC more heavily from the pre-harvest survey than from the post-harvest revision. This PRC procedure of estimating crop production established in 1956, may still be in effect, since PRC official estimates were published immediately after harvest and were rarely changed once announced, except upward.

Appendix table 1--People's Republic of China: ERS and PRC estimates of grain production, 1949-1974 1/

Year	ERS estimates 2/					Revised estimates, based on PRC data 3/				
	Total grain	Rice	Wheat	Miscel- laneous grain	Tubers 4/	Total grain	Rice	Wheat	Miscel- laneous grain	Tubers 4/
-- 1,000 metric tons --										
1949	108,100	48,650	13,800	35,800	9,850	108,100	48,650	13,800	35,800	9,850
1950	124,700	55,100	14,500	42,700	12,400	124,700	55,100	14,500	42,700	12,400
1951	135,050	60,550	17,250	43,250	14,000	135,050	60,550	17,250	43,250	14,000
1952	154,400	68,450	18,100	51,500	16,350	154,400	68,450	18,100	51,500	16,350
1953	156,900	71,250	18,300	50,700	16,650	156,900	71,250	18,300	50,700	16,650
1954	160,450	70,850	23,350	49,250	17,000	160,450	70,850	23,350	49,250	17,000
1955	174,800	78,000	22,950	54,950	18,900	174,800	78,000	22,950	54,950	18,900
1956	182,500	82,450	24,800	53,400	21,850	182,500	82,450	24,800	53,400	21,850
1957	185,000	86,800	23,650	52,650	21,900	185,000	86,800	23,650	52,650	21,900
1958	200,000	93,200	24,800	52,000	30,000	5/200,000	93,200	24,800	52,000	30,000
1959	165,000	78,900	23,910	40,940	21,250	5/165,000	78,900	23,910	40,940	21,250
1960	159,600	77,500	22,300	38,200	21,600	6/150,000	72,840	20,960	35,890	20,300
1961	166,700	80,200	16,500	45,400	24,600	6/162,000	77,940	16,040	44,110	23,900
1962	180,000	80,600	21,200	54,600	23,600	174,000	77,920	20,500	52,770	22,810
1963	179,300	78,400	22,000	54,600	24,300	183,000	80,030	22,450	55,720	24,800
1964	190,000	85,000	24,000	56,000	25,000	200,000	89,480	25,260	58,940	26,320
1965	195,500	88,000	24,500	59,000	24,000	200,000	90,020	25,060	60,360	24,560
1966	194,000	87,000	24,000	60,000	23,000	7/215,000	96,410	26,600	66,500	25,500
1967	218,000	95,000	25,500	71,500	26,000	8/230,000	100,230	26,910	75,440	27,440
1968	205,000	91,000	24,000	65,000	25,000	7/215,000	95,440	25,180	68,180	26,230
1969	213,500	95,000	25,500	67,000	26,000	7/220,000	97,900	26,270	69,040	26,800
1970	225,000	100,000	27,000	73,000	25,000	9/240,000	106,660	28,800	77,860	26,660
1971	225,000	103,000	26,000	72,000	24,000	246,000	112,620	28,440	78,720	26,250
1972	215,000	98,000	28,300	65,000	23,700	240,000	109,400	31,600	72,600	26,400
1973	228,000	103,000	27,500	72,500	25,000	250,000	112,950	30,150	79,500	27,400
1974	233,000	106,000	28,000	74,000	25,000	259,200	117,900	31,200	82,300	27,800
1975										

Sources and footnotes on next page.

Continued--

- 1/ Estimates for grain production for both ERS and the PRC for the period 1949-57 are official estimates from the Ten Great Years, People's Publishers, Peking, September 1959.
- 2/ For the period 1958-73, ERS estimates are annual estimates, periodically adjusted due to additional information, for both total grain output and for individual grains.
- 3/ $\text{PRC individual grain production} = \text{PRC total grain production} \times (\text{ERS individual grain production} \div \text{ERS total grain production})$.
- 4/ Tubers are reduced to grain equivalent at a ratio of one unit of grain to four units of raw tubers.
- 5/ The original PRC estimates for 1958 and 1959 of 250 million tons and 270 million tons, respectively, of grain were subsequently withdrawn by Government officials. Their overestimation for 1958 resulted in part because of political pressure and the fact that some grain was not harvested. The 1959 estimation was a planned figure, since few if any official estimates were published for 1959. The 1959 planned figure was not revised, even in light of the bad weather that developed during 1959. In the absence of better information, the revised ERS estimates for the 2 years are used. They are in line with other independent estimates for those years.
- 6/ For 1960-65, see Edwin F. Jones, the Emerging Pattern of China's Economic Revolution, An Economic Profile of Mainland and China, Joint Economic Committee, Congress of the United States, 1967, p. 93.
- 7/ Estimates for 1966, 1968, and 1969 are extrapolations based on the historical series and have no connection with official claims since none were published for these years.
- 8/ Letter from China, No. 55, Anna Louise Strong, January 15, 1968.
- 9/ Since 1970 PRC officials have provided a total grain estimate. For 1970 through 1974, the sources for the figures used here are as follows: 1970--Chou En-lai conversation with Edgar Snow, December 1970, The Sunday Star, March 28, 1971; 1971--People's Daily, December 31, 1971; 1972--People's Daily, December 31, 1972; 1973--Foreign Broadcast Information Service, No. 193, October 4, 1973; 1974--Foreign Broadcast Information Service, No. 13, January 20, 1975, quoting New China News Agency, Peking Radio, January 20, 1975.



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